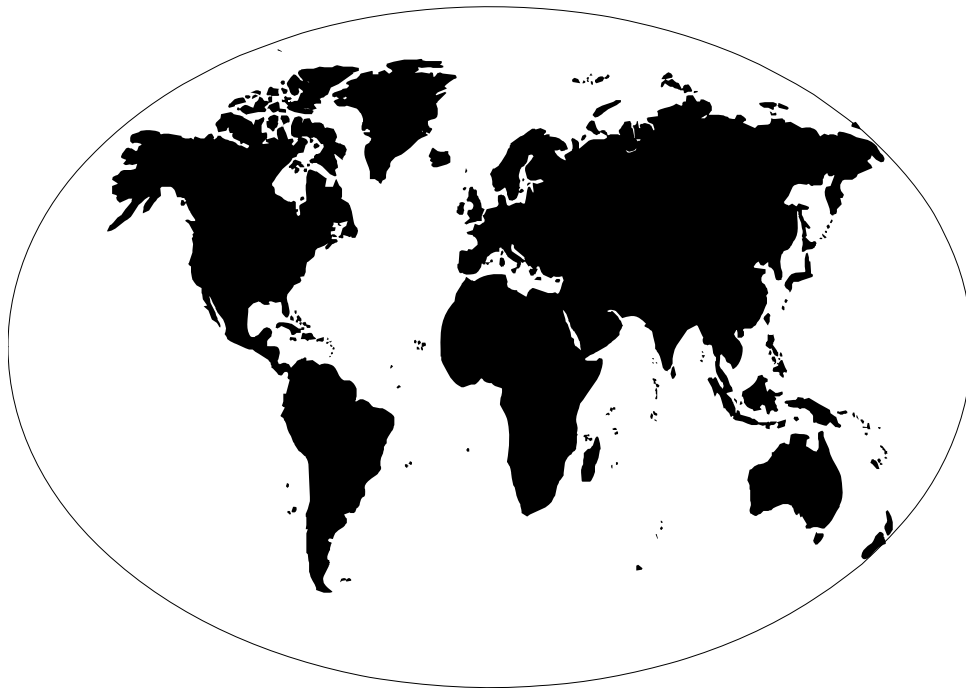


**U. S. Department of the Interior**

**International Technical Assistance Program**



**Quarterly Report**  
**March 31, 2007 through June 30, 2007**

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U.S. Department of the Interior

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**U.S. Department of the Interior  
International Technical Assistance Program  
Reporting Period: March 31 – June 30, 2007**

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## 1. International Technical Assistance Program

Established more than 150 years ago, the U.S. Department of the Interior (DOI) is the nation's principal conservation agency and responsible for the management and protection of its most precious natural, cultural, and historical resources. With over 80,000 employees and offices throughout the U.S., DOI manages 500 million acres of U.S. lands.

**AREAS OF EXPERTISE:** With donor funds, DOI's International Technical Assistance Program (DOI-ITAP) provides training and technical assistance to countries in areas of DOI staff expertise, such as:

*Protected area management*  
*Cultural resources management*  
*Environmental education*  
*Endangered species conservation*  
*Visitor services*  
*Recreation management*  
*Fire management*  
*Control of invasive species*

*Minerals management*  
*Reclamation of abandoned mine lands*  
*Ecotourism*  
*Wildlife law enforcement*  
*Resource interpretation*  
*Park infrastructure*  
*Concessions management*  
*Community outreach*

**DOI BUREAUS:** DOI-ITAP draws its staff from various DOI bureaus. The bureaus are listed below with a brief description of their responsibilities:

**National Park Service (NPS):** Manages more than 384 sites, including prime natural parks, historic and cultural areas, monuments, battlefields, seashores and lakeshores, and recreation areas. This bureau accommodates and educates more than 275 million visitors per year.

**U.S. Fish and Wildlife Service (FWS):** Responsible for the protection and conservation of fish, wildlife, and plants (including U.S. endangered species) and regulates the international trade of plants and animals. FWS manages more than 700 field units, including national wildlife refuges; national fish hatcheries; and law enforcement/ecological services field stations.

**Bureau of Land Management (BLM):** Manages more than 270 million acres of public lands for such diverse uses as energy, minerals, and timber extraction; livestock forage; fish and wildlife habitat; and scenic and recreational uses.

**Office of Surface Mining, Reclamation and Enforcement (OSM):** Restores mines abandoned before 1977 and is responsible for protecting people and the environment during coal mining and restoration.

**U.S. Geological Survey (USGS):** Responsible for scientific research and applications related to earth processes; natural disasters; and water, biological, energy, and mineral resources.

**Bureau of Indian Affairs (BIA):** Serves American Indians, Indian tribes, and Alaska Natives by providing social services, promoting economic opportunity, and protecting and improving trust assets.

**Bureau of Reclamation (BOR):** Manages 58 hydroelectric power plants and is the largest wholesale supplier of water in the United States.

**Minerals Management Service (MMS):** Manages mineral resources on the outer continental shelf of the U.S. in a safe and environmentally sound manner. MMS provides fiscal accounting and management of both onshore and offshore mineral resources.

#### **DOI-ITAP UNIQUE STRENGTHS:**

- DOI-ITAP offers technical experts with a depth of applied technical knowledge, international experience, and relevant language skills.
- DOI-ITAP fosters direct, sustained exchanges between U.S. natural resource managers and their host-country counterparts. These are often direct government-to-government partnerships through which DOI-ITAP provides the level of insight and assistance of which only governing agencies are equipped to offer (e.g., the issuance of regulations, law enforcement, jurisdiction considerations).
- All salaries for DOI-ITAP experts providing short-term technical assistance are covered by the U.S. Department of the Interior. DOI-ITAP matches donor contributions by an average ratio of 2:1.
- With its large internal training staff, DOI-ITAP can train the trainers to ensure long-term program sustainability.
- DOI-ITAP offers technical assistance on a reimbursable basis. Donor funds cover travel costs of travel and the per diem of DOI technical staff; support for field activities; equipment; and program management, coordination, and support. DOI covers the salaries of the technical experts on short-term assignments.

## **2. ACTIVE PROGRAMS**

The following are descriptions of the progress achieved in the Department of the Interior's current initiatives. New material is indicated in ***bold italics***.

## **CAMBODIA**

### **Wildlife Law Enforcement**

#### **SUMMARY OF ASSISTANCE**

In collaboration with Conservation International (CI) and WildAid, DOI-ITAP is providing training for park rangers and protected area managers in areas of DOI expertise, including technical assistance to the CITES Secretariat in Phnom Penh.

#### **FUNDING**

EAPF in FY'02

#### **RESULTS TO DATE**

##### **Assessment of Status and Conditions of Forest Resources**

A DOI-ITAP expert participated in a review team to assess the current state of data and information on the status and condition of Cambodia's forest resources. The DOI-ITAP expert helped develop guidance and methods for the assessment of the current distribution, status, and value of Cambodia's forests and forest lands (July 2003).

##### **Technical Assistance to the CITES Secretariat in Phnom Penh**

A team of two U.S. Fish and Wildlife Service (FWS) experts on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) traveled to Cambodia to: (1) provide training to Government of Cambodia officials on the implementation of CITES, including appropriate permitting procedures to authorize the international trade in CITES-listed species; and (2) provide assistance in finalizing Government of Cambodia draft legislation for the implementation of CITES (June 2004).

Through a contract with WWF/TRAFFIC, DOI-ITAP procured needed equipment for the CITES Secretariat. Among other equipment, the office now has a functioning phone, fax and email account.

One FWS CITES expert returned to Cambodia to participate in a Government of Cambodia-sponsored review and debate on the draft CITES legislation (July 2004).

#### **SIGNIFICANT PROBLEMS OR DELAYS**

There have been significant delays in assistance due to personnel changes in the field.

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

*DOI-ITAP has worked with Conservation International and TRAFFIC to identify needs for technical assistance. Funds to support selected activities will be transferred in July 2007.*

### **ADDITIONAL INFORMATION**

Reports are produced following each technical assistance assignment. Reports describing the results of DOI-ITAP technical assistance in Cambodia are available upon request.



## **CAPE VERDE**

### **Baseline Groundwater Evaluation**

#### **SUMMARY OF ASSISTANCE**

The USGS is working with the Millennium Challenge Corporation (MCC) to assist the Government of Cape Verde in assessing groundwater conditions in watersheds on the Islands of Fogo, Santo Antão, and São Nicolau. In these three basins, MCC and Cape Verde are planning agricultural projects that require additional water resources. Future plans include the construction of wells, surface water retention structures, and groundwater recharge galleries to enhance water availability. An evaluation of current groundwater baseline conditions is needed to assess the hydrologic effects of this proposed new infrastructure. Accordingly, USGS is providing the following technical assistance:

- Applying various methods for evaluating current groundwater conditions, including water level measurements and installation of continuously recording pressure transducers in wells; groundwater discharge measurements at springs and streams; and geochemical sampling for evaluating groundwater recharge sources and travel times;
- Assisting the Cape Verdeans in the design of groundwater monitoring networks, including a determination of the type and frequency of groundwater measurements appropriate for each watershed;
- Providing training, equipment, and manuals to the Cape Verdean counterparts who will operate the groundwater monitoring networks;
- Analysis of historical precipitation, water level, and spring discharge data (where available) to evaluate effects of previous climate and anthropogenic influences on groundwater conditions;
- Interpreting data from the groundwater monitoring activities in order to establish a baseline for evaluating the affects of future MCC projects.

#### **FUNDING**

Millennium Challenge Corporation in FY'05 through FY'07

#### **RESULTS TO DATE**

##### **Establishment of Ground-water Monitoring Network During First Mission (July-Aug 2005)**

A USGS mission on the Cape Verde Islands purported to: (1) provide training on groundwater monitoring and use of monitoring equipment; (2) establish groundwater monitoring networks in each of three watersheds; and (3) inventory wells and springs in each watershed.

### **Training Provided on First Mission**

Training on each of the islands visited consisted of a mix of classroom lectures and field demonstrations. The topics discussed or demonstrated included:

- An overview of USGS; (classroom)
- Basic concepts in conducting a groundwater study; (classroom)
- Groundwater level monitoring; (classroom/field)
- Hand-held GPS use; (field)
- Water level measurements using steel tape, electric tape, and pressure transducer; (classroom/field)
- Water quality sampling techniques; (field)
- Age dating and recharge evaluation; and (classroom/field)
- Spring discharge measurements. (field)

### **Data Gathered on First Mission**

The team spent time on each island meeting with local water users and managers, collecting water quality information (field parameters and samples for age-dating and isotopes), and searching for potential control basins.

### **Second Mission**

During the second mission to the Cape Verde Islands, USGS experts:

- Provided additional ground-water monitoring equipment and training;
- Completed the inventorying of existing wells and springs in each of the three watersheds;
- Collected geochemical samples for evaluating sources of recharge and groundwater travel times within each watershed;
- Obtained Geographic Information System (GIS) coverages; and
- Gathered historical precipitation and groundwater data (Nov-Dec 2005).

### **Training Provided During Second USGS Mission**

The following field training was provided on each of the visited islands:

- Use of GPS for establishment of new groundwater site locations;
- Procedures for groundwater inventorying of wells and springs;
- Electric tape water level measurements in wells;
- Spring and stream discharge measurements;
- Installation and operation of pressure transducers in wells; and
- Water quality sampling methods.

## Information Exchange and Data Gathering During the Second USGS Mission

The team first traveled to the capital city of Praia to acquire historical and ongoing precipitation, well, and spring data, in addition to detailed GIS coverages of each watershed. They also brought additional groundwater monitoring equipment, presented preliminary findings from the previous USGS mission, and submitted the first draft of a groundwater data collection field manual. Next, the team spent time on each island meeting with local water users and managers; measuring water levels and installing pressure transducers in wells; quantifying stream and spring discharge; and collecting water samples for geochemical analysis.

## General Outcomes

A wide variety of hydrologic data has been collected to better understand the current status of the aquifers in each of the three watersheds. Only a few observation wells have been inventoried, but other information has been found useful in evaluating groundwater baseline conditions, including spring and stream discharge measurements; precipitation data; geology; topography; morphology; environmental tracers (age-dating and recharge source evaluation); historic water level data; and historic discharge data from springs, tunnels and wells.

### Success Story

This work provided the MCC and Cape Verdeans with the information necessary for objectively assessing the availability of current water resources, aided in the development of metrics and indicators for the evaluation of impacts of agricultural development projects in the three watersheds, and enabled the development and implementation of an integrated water resources management plan. The work directly impacted the implementation of the approximately \$110 Million MCC/MCA project in Cape Verde.

## Deliverables

Final Report: A first draft of the final report, “Evaluation of Groundwater Baseline Conditions in the Mosteiros, Ribeira Paul, and Ribeira Fajã Basins, Republic of Cape Verde, West Africa” was submitted to MCC (April 2006). A final report for comment by MCC and MCA was submitted on June 30, 2006. The report was published in Oct 2006.

List of Recommendations: A list of recommendations on water sanitation in each of the three watersheds was prepared, including options for continued monitoring and evaluation; alternative water development; and follow-up studies for meeting the needs of the planned agricultural development. The list of recommendations was provided on June 30, 2006.

Field Manual: The final draft of the “Field Manual for Collection of Groundwater and Spring Data in the Republic of Cape Verde” was submitted to MCC (March 2006).

Presentation of Findings: Cape Verde groundwater study findings were presented at the National Groundwater Association’s Summit 2006 meeting in San Antonio, Texas, under the working title, “Alternative Methods for Assessing Groundwater Conditions in Three Cape Verde Island Watersheds with Sparse Well Data” (April 2006).

Preliminary Findings: Were delivered to MCC in a presentation in May 2006. The presentation was followed by a meeting to discuss the implications of these findings for the planned agricultural projects in the three watersheds and how to develop additional methods of communicating these findings to Cape Verdeans.

The findings were presented to the Cape Verdeans by televideo on June 2, 2006.

A workshop in Cape Verde was held July 2006. It included a discussion of the findings, a final report, and recommendations for future monitoring, evaluation, and follow-up actions. The workshop also included water resources management scenarios.

Continued assistance of USGS/DOI to MCC: USGS/DOI, in collaboration with MCA and MCC, has developed a mechanism and budget to continue the USGS/DOI technical assistance program in Cape Verde into FY’07. The USGS performed a technical review of MCA-CV’s “Water Resources Monitoring Plan in Paul, Faja, and Mosteiros Watersheds, Cape Verde, December 2006”. This detailed review by three USGS Hydrologists, focusing on the technical aspects of the planned ground-water monitoring and development in each of the three watersheds, was completed in January 2007.

The USGS developed the following four documents for the MCC in support of developing a drilling contract for the planned production and control wells:

- Cape Verde Control Well SOW (word document)
- Cape Verde Control Well Specs (excel document)
- Cape Verde Production Well SOW (word document)
- Cape Verde Production Well Specs (excel document)

The USGS participated in several conference calls with MCC in order to provide technical insight on the development of the Water Resources Monitoring Plan and the Drilling Specifications Contract.

#### **SIGNIFICANT PROBLEMS OR DELAYS**

None

### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

1. Providing technical assistance to the MCC as they coordinate with the MCA during the implementation of the MCA-CV's Water Monitoring Plan through informal phone conversations, email communications, and written correspondence.
2. Planning tentatively a next mission for Fall 2007 to provide oversight for drilling production/monitoring wells and technical oversight and review of the hydrologic data and reports outlined in the Water Resources Monitoring Plan

### **ADDITIONAL INFORMATION**

Reports detailing the results of DOI-ITAP technical assistance in Cape Verde are available upon request.

## **CENTRAL AMERICA**

### **Sustainable Tourism at Mayan Archeological Sites**

#### **SUMMARY OF ASSISTANCE**

DOI-ITAP has signed a 5-year Memorandum of Understanding (MOU) with the Mundo Maya Organization (MMO) to provide technical assistance and training to the MMO countries (Belize, El Salvador, Guatemala, Honduras and Mexico). DOI-ITAP has provided technical assistance to 12 selected Mayan sites in the areas of: protection and maintenance of natural and cultural resources; visitor infrastructure, services and education; capacity building; and community participation. DOI-ITAP staff members are working closely with in-country archeologists, park managers, engineers, economists, and the local communities.

#### **FUNDING**

Inter-American Development Bank in FY'05  
Inter-American Development Bank in FY'03  
Inter-American Development Bank in FY'02

#### **RESULTS TO DATE**

##### **Draft a Management Plan for Río Amarillo, Honduras**

Following the DOI-ITAP recommendations from a 2002 Assessment Trip (see below), the Government of Honduras (the Tourism and Archeological Ministries) contracted DOI-ITAP to develop a Management Plan for the Río Amarillo Archeological Park in western Honduras. This park currently lacks active protection and presence. At the direction of the Government of Honduras, DOI-ITAP designed the Plan to: (1) foster the investigation, restoration, and protection of the Mayan cultural resources; (2) offer the visitors an experience that complements that offered by the nearby and world-renowned Copan Archeological Park; and (3) create employment opportunities for the residents of the nearby towns of La Castellona and other local communities. The Government of Honduras is reviewing the Plan in its final draft form and is expected to finalize it by the end of March 2006 (Oct 2005).

##### **Park Planning and Management Technical Assistance**

Guatemala: A team consisting of three DOI-ITAP staff (architect, planner, and educator) provided technical assistance to park staff at the Tikal and Yaxhá-Nakum-Naranjo sites in Guatemala on the topics of park planning, visitor services, interpretation and education, and local community outreach (July 2002).

Honduras: A team consisting of three DOI-ITAP staff (planner, educator, and park manager) provided technical assistance to park staff at the Copan and Río Amarillo sites in Honduras in the topics of park planning, visitor services, interpretation and education, and local community outreach (June 2002).

## **Park Infrastructure Evaluation and Planning**

Guatemala: A DOI-ITAP team (an architect and a landscape architect) evaluated and provided recommendations on the setting and design of a visitor center and other necessary structures (e.g., administrative offices and staff dormitory) for the Yaxhá-Nakum-Naranjo Natural Monument. The IDB—funding this construction project through its Sustainable Development of the Petén Program—wanted to ensure the most effective use of its funds. Based on DOI-ITAP recommendations and with the support of on-site stakeholders, the visitor center was relocated to a more appropriate site and the design was altered to allow for improved visitor flow, safety, and the incorporation of sustainable design principles (i.e., principles of conservation including using energy, water, and other resources more efficiently) (Jan 2003).

### **Success Story**

When an IDB program manager informally met with a DOI team in Guatemala, he was so impressed by the DOI's team recommendations that he immediately halted an ongoing visitor center construction project and hired DOI to improve the visitor center's design and utility. Following DOI's recommendations, work on the center has since resumed.

El Salvador: A team of DOI-ITAP staff conducted a comprehensive infrastructure evaluation of the natural park complex called "Complejo Los Volcanes" that consists of three relatively small protected area subunits located within a complex of volcanoes. The team provided recommendations that will increase park visitor enjoyment and education, including improvements to park interpretation/education services and visitor buildings (Sept 2002).

## **DOI-ITAP Assessment Trip/Planning**

Recommendations: DOI-ITAP provided the MMO and IDB with a comprehensive report detailing DOI-ITAP's findings and recommendations for follow-up for each of the 12 MMO sites. These recommendations include cost estimates and descriptions of work that DOI-ITAP can complete (Sept 2002).

Assessment: DOI-ITAP completed an initial assessment trip to all of the MMO-selected sites and provided recommendations for technical assistance and training that DOI-ITAP can provide through December 2002 (Feb 2002).

## **SIGNIFICANT PROBLEMS OR DELAYS**

The final response of the Government of Honduras (multiple agencies) on the Management Plan for Rio Amarillo Archeological Park is still pending.

## **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

None - Activities are completed as requested by the IDB or MMO.

### **ADDITIONAL INFORMATION**

Reports are produced following each technical assistance assignment. Reports describing the results of DOI-ITAP technical assistance on the Mundo Maya project are available upon request.



## **CENTRAL AMERICA/DOMINICAN REPUBLIC**

### **Protected Area Law Enforcement**

#### **SUMMARY OF ASSISTANCE**

With funding from the State Department, DOI-ITAP is working under the Central America/Dominican Republic Free Trade Agreement (CAFTA-DR) to support resource law enforcement efforts in the region. U.S. resource enforcement officers will conduct on-site consultations with selected law enforcement officials in each country. After a consultative process, U.S. resource enforcement officers will conduct law enforcement workshops and field training in topics identified as a priority.

#### **FUNDING**

State Department in FY'05

#### **RESULTS TO DATE**

##### ***Guatemala***

*In Guatemala, the focus to date has been on:*

- *Cross-Sector Law Enforcement Basic Training Course - Training held in the eastern Maya Biosphere Reserve, where the largest tracts of intact forests and significant archeological sites offer the greatest existing and potential opportunities for sustainable tourism.*
- *Law Enforcement Needs Assessment - A national-level needs assessment of the law enforcement and security issues in protected areas of Guatemala completed.*

##### ***Results Achieved:***

- *First-ever field-staff-level law enforcement training course completed in Guatemala. Course focused on search and rescue, first aid, patrolling, reporting, map and compass use, and evidence handling, in addition to best practices for interagency and cross-sector collaboration and coordination.*
- *First-ever integrated training completed of any type for park and community guards, helping to build communication and coordination lines between the sectors.*
- *Ground-breaking cross-sectoral representation, as participants and trainers, including Government of Guatemala (GOG), local communities, and NGOs. The trainees consisted of 105 representatives drawn from the Guatemalan Parks Service, Ministry of Culture, Institute of Tourism, NGOs, in addition to 30 local community forestry concessions. Senior-level GOG staff, including Military and National Police, assisted as trainers.*
- *Initiated development of field-level training curriculum.*

- *Needs assessment provided recommendations for strengthening of agency organization and interagency coordination and communications, field-level operations, training, and equipment. Weakest link: judicial/prosecutorial systems and processes.*
- *Government of Guatemala will use these recommendations in “Presidential Candidates Forums” schedule for this summer with each of the presidential candidates (elections in Sept 2007), to educate and begin lobbying for support.*

#### **Honduras/Dominican Republic**

*A DOI-ITAP LE team, consisting of two DOI LE experts, were sent to conduct a law enforcement needs assessment under an InterAgency Agreement with the U.S. Department of State, in support of the Central American-Dominican Republic Free Trade Agreement (CAFTA-DR). The objective of this trip was to increase the capacity of local and national environmental law enforcement bodies (April 2007).*

#### **Nicaragua/El Salvador**

*A DOI-ITAP team, consisting of two DOI LE experts provided critical needs assessments and recommendations for policy implementation. The assessments were based on a thorough review of the procedures, and policies, and regulations of each country. The two experts also recommended local level interventions to improve protected area law enforcement (June 2007).*

#### **Administration**

An Interagency Agreement was signed with the State Department (June 2006).

Management team completed initial collaboration with government representatives and local conservation NGOs to design and deliver a short-term training in Guatemala that responds to local needs and priorities related to enforcement of natural resource conservation laws (Aug/Sept 2006).

Law enforcement teams selected and prepped (Oct 2006).

Management team completed initial discussions and collaboration with CAFTA governments regarding strategic planning and priority setting for law enforcement (Nov 2006).

Project objectives were refined following discussions with USAID, State Department, and CAFTA-DR countries.

#### **SIGNIFICANT PROBLEMS OR DELAYS**

None

**MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

None

**ADDITIONAL INFORMATION**

No reports are available on this project.

## **ECUADOR**

### **Conserving Biodiversity in Protected Areas**

#### **SUMMARY OF ASSISTANCE**

USAID/Ecuador Mission: DOI-ITAP is providing technical assistance to help the USAID/Ecuador Mission accomplish Strategic Objective 1: Biodiversity conserved in selected protected areas and their buffer zones. DOI-ITAP is providing technical assistance to The Nature Conservancy and its partners – Fundación Antisana and Fundación Ecologica Rumicocha – on key components of The Nature Conservancy’s Project Bioreserva del Condor in five of Ecuador’s high Andean protected areas:

1. Cayambe-Coca Ecological Reserve (403,103 hectares)
2. Antisana Ecological Reserve (120,000 hectares)
3. Cotopaxi National Park (33,393 hectares)
4. Sumaco Galeras National Park (205,249 hectares)
5. Cotacachi Cayapas buffer zone

CARE: DOI-ITAP is also providing technical assistance to CARE and its partners – Ecociencia and Jatun Sacha – on the SUBIR project and the Southern Border Development Program.

Charles Darwin Foundation and Galapagos National Park: DOI-ITAP is providing technical assistance to the Charles Darwin Foundation and Galapagos National Park in support of conservation of the rich biodiversity on the Galapagos Islands.

#### **FUNDING**

USAID/Ecuador in FY’06  
USAID/Ecuador in FY’05  
USAID/Ecuador in FY’02  
USAID/Ecuador in FY’01  
USAID/Ecuador in FY’00  
USAID/Ecuador in FY’99  
USAID/Ecuador in FY’98

#### **RESULTS TO DATE (FY’01 - PRESENT)**

##### **Andean Highlands**

Environmental Education: DOI-ITAP organized a network of environmental educators in the Condor Bioreserve area. This network ties the area’s environmental education efforts to common objectives. DOI-ITAP has provided follow-on technical assistance to the network in: the preparation and presentation of a theme-based program; interpretation for park guards; zoo interpretation; classification and techniques for working with different age groups and audiences; ecological clubs; interpretive planning; and the history, philosophy, and theory of environmental education.

DOI-ITAP interpreters worked with Peace Corps/Ecuador and the El Chaco municipality to provide a train-the-trainers workshop for Peace Corps Volunteers and Ecuadorian counterparts on environmental education and interpretation (Sept 2004).

Ecotourism, Interpretation and Environmental Education: A team of DOI-ITAP experts worked in partnership with Altrópico, a Peace Corps volunteer, and two university students to deliver two workshops on ecotourism, interpretation, and environmental education in Mindo. One workshop focused on basic ecotourism concepts and hands-on environmental education/interpretation activities for 25 people from communities in Carchi and the Amazon. An advanced workshop built upon the experience of emerging ecotourism in Mindo and included 24 people from Mindo and from Kapawi in the Amazon region. In both workshops, participants developed follow-up projects to implement in their home regions. Between the workshops, the DOI-ITAP team conducted several site visits to provide hands-on assistance and training on environmental education and interpretation in La Isla, Mindo, and Tulipe (Sept 2006).

Oil Spill Response in Watersheds: A team of DOI-ITAP contaminants specialists provided a hands-on, state-of-the-art training on responses to various oil spill scenarios. The training, which incorporated initial response protocols and post-spill resource monitoring, focused on above the ground oil pipeline ruptures in high Andean habitat. The training included a formal 1-week course, in addition to pre-course monitoring and post-course follow-up activities (Aug 2005).

With Fundación Ecologica Rumicocha, a DOI-ITAP team specializing in oil spill contingency planning and GIS conducted a workshop to develop a contingency plan and map for the Quijos River Valley (March 2007).

Resource Inventory and Monitoring: A DOI-ITAP team spent 3-weeks providing assistance to Cotopaxi National Park staff and Ecuadorian NGOs. This included coordinating a monitoring needs assessment; providing training in resource monitoring; and working with the park and NGOs to develop a resource monitoring plan. The plan includes tracking wildlife sightings, vegetation changes, photographic monitoring of fire impacts and ecosystem recovery, and record keeping of park visitation and visitor use impacts/trends (May 2004).

Spectacled Bear Research: A DOI-ITAP bear expert reviewed the existing spectacled bear research project. The expert reviewed and revised statistical modeling procedures (e.g., census protocols) and presented a workshop on habitat analysis. Workshop participants included 18 scientists from Colombia, Venezuela, and Ecuador (May 2002).

DOI-ITAP sponsored one Ecuadorian spectacled bear researcher to present a paper at the 14th International Conference on Bear Research and Management in Norway (Aug 2002).

DOI-ITAP assisted Ecociencia with further research on Ecuadorian spectacled bear habitat in the Condor Bioserve (Sept 2004).

DOI-ITAP and Ecociencia researchers jointly published a paper on habitat modeling for conservation of spectacled bear populations in the scientific journal *Ursus* (Winter 2005).

Visitor Center Development: One DOI-ITAP interpretive planner traveled to Cotacachi Cayapas Ecological Reserve and the Quito Zoological Park to meet with Ecociencia staff to assist with the planning and design of interpretive centers (July 2002).

Water Resource Management and Outreach: Fundación Antisana is a local NGO working on water resource issues and the protection of Antisana Ecological Reserve—a high Andean protected area located southeast of Quito. A workshop focusing on regional water resource development issues and financing the protection of environmental services provided by the ecological reserve. Increasing demands for water from Quito and other communities and proposals to tap into Antisana's water resources motivated the request for DOI-ITAP assistance. The DOI-ITAP team conducted media interviews with Radio Bolivar and Quito's principal television station (Gamavision) as part of the effort to better inform the public about water resource development and environmental protection (July 2001).

DOI-ITAP and Fundación Antisana conducted a workshop on tools and techniques for assessing and evaluating the impacts of water resources development and focused on the impacts of surface water diversions and dams. Two dozen participants from local non-profit and community organizations and the Environment Ministry attended the workshop (Dec 2004).

Additional Training: DOI-ITAP has provided training and technical assistance to Ecuadorians associated with the Condor Bioserve Project in:

- Condor reintroduction;
- Relevant, practical, and effective environmental education techniques;
- Interpretation and interpretive planning;
- Development of ecotourism activities;
- Protected area management;
- Biological monitoring;
- Aquaculture and the development of recreational fishery opportunities; and
- Resource valuation.

## **Galapagos Islands**

Aerial Photography: Using the Seawolf aircraft procured by DOI-ITAP in 2003 for the Galapagos National Park, DOI-ITAP provided technical assistance in aerial photography. A DOI-ITAP expert trained park staff in the use and maintenance of aerial photographic equipment and data analysis. High resolution aerial photographs will enable the park to maintain detailed data of strategic conservation sites to monitor natural phenomena (e.g., fire and drought) and man-made threats such as oil spills. Additionally, the data can be used to perform multi-temporal analysis of visiting, breeding, and nesting sites for migratory birds and other wildlife, as well as critical sites of human or natural interference (May 2004).

Ecotourism: DOI-ITAP worked with staff from USAID/Ecuador and Galapagos National Park to develop Terms of Reference (TORs) for the Isabela Ecotourism development project. The TORs will be used as a basis for contracting this project to the private sector. DOI-ITAP's assistance has been requested for certain specialized areas of this project (July 2001).

DOI-ITAP provided two experts to assist in the development of an ecotourism plan and an environmental assessment for the Isabela Island unit of the Galapagos Islands National Park. The experts worked with all relevant partners to develop a scope of work and terms of reference for initial program components, which include community organization; a socioeconomic study; and the development of an ecotourism plan (March 2002).

Fisheries Assistance: DOI-ITAP worked with the Charles Darwin Research Station on the management of their fisheries database. Efforts included cleaning and reinstating the integrity of the database; establishing a security system; and training staff to effectively maintain and utilize this database (June 2001).

Follow-up assistance on the fisheries database has included the addition of stock assessment numbers for both sea cucumbers and spiny lobsters at the Charles Darwin Research Station (July 2002).

Spiny Lobster Assistance: DOI-ITAP facilitated the recruitment of a spiny lobster expert from Old Dominion University, Norfolk, VA, to provide technical assistance to the Charles Darwin Station Foundation, the Galapagos National Park, and university researchers in Ecuador. The expert helped to design and place collection devices in lobster habitat of the Galapagos, and participated in the collection and reintroduction of post larvae at select sites within the park (March 2007).

Interpretation: DOI-ITAP worked with the Galapagos National Park to design, construct, and install interpretive and destination signs at trail heads in newly established trails within the Park. It also trained personnel in the design, construction, and installation of park signs—as well as creating a list of equipment needs for future signs. Most of the sign work occurred on the Island of Isabela (July/Aug 2002). DOI-ITAP worked with the Charles Darwin Research Station to provide recommendations to upgrade terrestrial and marine exhibits at the Van Straelen Interpretation Center on Puerto Ayora. Recommendations were also provided to the NGO Ecociencia regarding interpretive planning and exhibit development (May 2001).

A DOI-ITAP representative provided assistance in the design and construction of interpretive panels to be displayed in the new visitor center on Isabela Island, Galapagos National Park (June 2003).

A team of two DOI-ITAP interpretation experts provided technical assistance on interpretation and exhibit development for a community environmental education and interpretive center in Puerto Ayora, Santa Cruz, focused on the Galapagos Marine Reserve. Working with staff from Galapagos National Park and the Japan International Cooperation

Agency the DOI-ITAP team helped organize a community outreach meeting, developed a conceptual framework for the center's permanent exhibits, and drafted preliminary text in English and Spanish based on identified objectives, audiences and themes. In addition, the DOI-ITAP team reviewed funding and operational considerations for the center's exhibits and recommended strategies for the preparation and advertisement of design and fabrication contracting documents (Dec 2005).

Invasive Species Management: A DOI-ITAP representative provided technical assistance on the eradication of the introduced puddle frog, a non-native species to the Galapagos which is exerting a seriously adverse impact on Isabela Island's wetlands resources. The control of this invasive species is viewed as an extremely urgent management issue. Follow-up technical assistance via email has been provided (May 2002).

A DOI-ITAP representative participated in the Technical Advisory Group for Invasive Species in Galapagos Islands National Park and provided follow-on technical assistance and advice regarding control of invasive amphibians (June 2003).

DOI-ITAP completed a critical review of an invasive species (Tilapia) control plan for the Galapagos National Park (April 2006)

A DOI-ITAP representative provided technical assistance in the design and construction of native gardens on Isabela Island, Galapagos National Park (Aug 2003).

Law Enforcement: DOI-ITAP is providing ongoing training in law enforcement to Galapagos National Park guards. DOI-ITAP has provided basic training and more advanced law enforcement training on techniques for control and surveillance. The training consisted of classroom time and practical exercises. In addition, relevant equipment was provided to the park guards, including small tents; sleeping bags; flashlights; Leatherman tools; night vision binoculars; video cameras; digital cameras; GPS portable units; boots; and rain gear. The DOI-ITAP agents also worked with their counterparts to develop practical law enforcement forms. DOI-ITAP law enforcement special agents provided the law enforcement technical assistance during the initial training period April/May 2000. The international NGO WildAid worked in conjunction with these agents during the more advanced training course in Sept/Oct 2001.

DOI-ITAP conducted advanced marine law enforcement training in conjunction with WildAid (Aug 2003).

DOI-ITAP worked with Galapagos National Park to design and procure a set of custom-designed badges for official law enforcement personnel. These badges will easily and readily identify law enforcement personnel to park users. The badges will be distributed by the Park and USAID in an official ceremony at the end of the marine law enforcement training scheduled for February 2005 (Aug 2004).



A DOI-ITAP law enforcement expert spent 3.5 days aboard the Guadalupe River providing one-on-one training to park guards and observing the enhanced law enforcement capabilities of the newly refurbished Guadalupe River (Sept 2004).

A DOI-ITAP team of law enforcement experts partnered with the NGO WildAid to provide an advanced marine law enforcement course for Galapagos National Park marine reserve guards and several visiting guards and officials from Panama, Colombia, and Costa Rica. Through case studies and role playing scenarios, guards learned techniques for crime scene investigations, patrolling by sea, and first aid. In addition, DOI-ITAP procured binoculars and GPS units for the marine reserve. The DOI-ITAP team trained the guards on how to use and maintain these tools to enhance their law enforcement capabilities (Sept 2005).

Marine Biological Monitoring: DOI-ITAP led the effort to revise and upgrade the Galapagos Islands biological monitoring program to include the newly designated marine reserve (May/June 2000).

Marine Reserve Plan Development: DOI-ITAP has provided technical assistance to Ecuadorians working with Galapagos National Park and the Charles Darwin Research Station on the development and implementation of a marine reserve management plan (July 1999).

Museum Curation: DOI-ITAP sponsored 3-weeks of intensive museum curation training for Carlos Villon, a Galapagos National Park staff member. The training was located at the California Academy of Sciences in San Francisco, which houses the largest collection of Galapagos biological materials outside of the Galapagos. Villon is expected to apply the training to revamp the museum collection on the Galapagos (Feb 2003).

## **Guayaquil**

Law Enforcement: DOI-ITAP provided a short law enforcement overview for the Bosque Protector Cerro Blanco Protected Area (Sept 2004).

Watershed Infrastructure Impacts: DOI-ITAP conducted a short technical assessment of several water infrastructure and land use projects that are planned or being implemented in and near Guayaquil. It also provided recommendations for the city's Environmental Management Agency (Dec 2004).

## **SUBIR Project**

Community Forestry and Roads: DOI-ITAP conducted road location and timber harvesting short courses with NGOs in Quito and at selected field sites. This assistance was a continuation of previous technical assistance on appropriate road development for community forestry under the SUBIR project (Sept 2001).

Remote Sensing Technology Assistance: DOI-ITAP provided technical assistance on remote sensing techniques for sustainable community forestry purposes. A workshop focused on the

principles of vegetation inventory using satellite imagery and imagery processing techniques. Protocols were documented and developed into manuals. A formal link between the National Science and Technology Center in the U.S. and the SUBIR project was established to facilitate SUBIR's continued access to the most up-to-date technology and promote ongoing training and exchange opportunities. Ongoing technical assistance -- via email -- is being provided on remote sensing issues as they relate to refining photo-interpretation technology for sustainable community forestry (May 2001).

### **Protected Area Management Courses**

Wildlands Management in the Tropics Course: Six Ecuadorian protected area managers attended the third annual Wildlands Management in the Tropics training program (managed by the Organization for Tropical Studies) in Costa Rica. Two of the trainees were from indigenous communities (Aug/Sept 2001).

DOI-ITAP sponsored five Ecuadorians to participate in the fourth annual Wildlands Management in the Tropics course in Costa Rica (Aug/Sept 2002).

DOI-ITAP sent four participants from Ecuador to the fifth Annual Wildlands Management in the Tropics course in Costa Rica (Oct/Nov 2003).

### **Project Coordination**

Meeting with Partners: To plan technical assistance projects for the rest of FY'04 and early FY'05, DOI-ITAP project managers met with USAID/Ecuador and local partners including Rumicocha; The Nature Conservancy; Fundacion Antisana; the Altropico in Quito; and Galapagos National Park staff, the Charles Darwin Foundation, and Wild Aid in the Galapagos (March/April 2004).

Meetings: A DOI-ITAP Project Manager and marine law enforcement expert traveled to Guayaquil and the Galapagos. The Project Manager met with: (1) USAID/Ecuador, Mexican fisheries experts, an IUCN fisheries representative, and Ecuadorian counterparts to plan a Galapagos/Mexico fisheries exchange; (2) the head of the Guayaquil Environment Department to review potential projects regarding the City of Guayaquil; and (3) the Executive Director of the Bosque Protector Cerro Blanco to plan a 1.5 day law enforcement overview for Bosque Protector Cerro Blanco protected area. With the marine law enforcement expert, the Project Manager reviewed operations of the Seawolf aircraft and Guadalupe River patrol vessel. On the aircraft, the team conducted a 4.25 hours overflight of the marine reserve to observe law enforcement efforts (Sept 2004).

Coordinated Amphibious Aircraft Training: A contract was processed with MT & Associates to provide GNP staff with training on the care and maintenance of the Seawolf amphibious aircraft procured for the Galapagos by DOI-ITAP (March 2005). DOI-ITAP coordinated a training that was provided by the contractor (MT & Associates) for five individuals (including a GNP pilot and mechanic and a park consultant) on the maintenance

of the GNP Seawolf amphibious aircraft that is used for law enforcement and resource monitoring activities (April 2005).

Coordinated Emergency Equipment: DOI-ITAP coordinated the return shipment to the Galapagos of an emergency life raft and life vests for the Seawolf aircraft flight crew (July 2005).

Review of USAID Ecuador Strategic Plan: DOI-ITAP provided feedback to the USAID Ecuador Environment team on the environment strategy for the USAID Ecuador 2007-2012 Strategic Plan.

Infrastructure in Protected Areas: At the request of USAID Ecuador, DOI-ITAP prepared a brief overview of the complex issues involved in designing and implementing a user fee program for infrastructure installations in protected areas. DOI-ITAP also assembled a list of available reference materials.

Meetings with USAID Ecuador: DOI-ITAP organized two meetings for the USAID Ecuador project manager during her visit to Washington DC. The first meeting was with the DOI-ITAP team, the second one with the National Park Service to discuss the Galapagos World Heritage designation (Sept 2006).

Meeting with NOAA and Galapagos Officials: At a meeting in Washington, DC, co-hosted by the National Oceanic and Atmospheric Administration and the National Park Service, DOI-ITAP met with visitors from the Galapagos Islands, including the Galapagos National Park Director and Marine Reserve Director; representatives from the tourism and fisheries sectors; and NGO representatives, to discuss current and future issues in the Galapagos as it pertains to the World Heritage Convention (Oct 2006).

#### **SIGNIFICANT PROBLEMS OR DELAYS**

None

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

A team of fisheries biologists will travel to San Cristobal in the Galapagos Islands to assist Galapagos National Park and Charles Darwin Foundation staff with habitat studies, and development of a control and monitoring plan for invasive tilapia in Laguna del Junco.

#### **ADDITIONAL INFORMATION**

Reports are produced following each technical assistance assignment. Reports describing the results of DOI-ITAP technical assistance in Ecuador are available upon request.

## **GEORGIA**

### **Protected Areas Development**

#### **SUMMARY OF ASSISTANCE**

DOI-ITAP has established a long-term working relationship with the Republic of Georgia to foster a national system of protected areas in Georgia. The working relationship was formalized in a Memorandum of Understanding signed in 1999 which created a general technical assistance program and a specific sister park relationship. With funding from USAID/Georgia, DOI-ITAP is providing broad technical assistance at the headquarters level to establish a national training center and a national training program focused on issues of park system management, administration, and personnel management. DOI-ITAP is also providing field-level technical assistance and training.

#### **FUNDING**

USAID/Georgia in FY'06  
USAID/Georgia in FY'05  
USAID/Georgia in FY'00  
USAID/Europe and Eurasia Bureau in FY'99

#### **RESULTS TO DATE (Project Phase II)**

##### **Administration**

DOI-ITAP completed the contracting process to hire an in-country coordinator for the project. Paata Shanshiashvili now serves as the project's in-country coordinator (Aug 2006).

##### **Demonstration Sites**

A DOI-ITAP traveled to Georgia to assess the proposed Tbilisi and Racha National Parks as visitor service-focused demonstration sites. The team is finalizing its report, which contains recommendations for visitor services activities system-wide as well as at the two demonstration sites (Oct 2006).

##### **Training Center and Training Program Development**

DOI-ITAP fielded a team to provide assistance to the Ministry of Environmental Protection and Natural Resources in establishing a National Training Center within the Ministry's headquarters. The team worked with the appropriate Ministry personnel to conduct an assessment of the Ministry's current needs and facilities and also assisted with the initial planning and operational aspects of the proposed training center. The team also assessed priority needs to be addressed by a comprehensive training program for Ministry staff and developed training modules for priority topics (Aug 2006).

***DOI-ITAP conducted a study tour to the U.S. for a group of Government of Georgia representatives, including the Minister of Environmental Protection and Natural Resources. A meeting between the Georgian Minister and Secretary Kempthorne was conducted, during which a Memorandum of Understanding for further cooperation was signed. The delegation visited the National Conservation Training Center in West Virginia, the National Mall, Pt. Reyes National Seashore -- during which a Sister Parks Agreement was signed with Kolikheti National Park -- and Yosemite National Park (May 2007).***

## **GIS Training**

DOI-ITAP sent a team of wide GIS specialists to Tbilisi to provide assistance to the Ministry of Environmental Protection and Natural Resources in enhancing/developing new protected areas Geographic Information System. The team conducted an assessment of the Ministry's GIS needs and capabilities and provided follow-up recommendations (May 2006).

## **Planning**

Development of Work Plan: DOI-ITAP sent a team to Tbilisi in October 2005 to put together a work plan for DOI-ITAP technical assistance to the Ministry for FY'06. During and after the trip, DOI-ITAP has consulted with USAID/Tbilisi, the Ministry of Environment Protection and Natural Resources, and key conservation NGOs based in Tbilisi to create a comprehensive work plan for FY'06 that will lead to additional activities in FY'07 to support the Ministry's goals. The work plan details four major areas of technical assistance identified as major Ministry priorities including the:

- development of a Ministry-wide training center and employee training program;
- assessment of current and future needs for GIS data and applications;
- development of a protected areas outreach plan; and
- development of an urban and rural protected area demonstration site.

National Outreach Plan: DOI-ITAP has identified a team that can develop or review a national outreach plan, if requested by the Ministry.

## **Environmental Legislation Analysis**

***A DOI-ITAP team of two environmental legislative analysts conducted a comprehensive assessment of Georgia's protected areas and related legislation, conducted workshops with representatives of national-level institutions to garner agreements on strategic principles and develop national-level management policies, and have provided recommendations on protected areas management policies and legal amendments (April 2007).***

## **RESULTS (Phase I of the Project)**

### **Protected Area System**

Institutional Planning and Restructuring: DOI-ITAP sent a team to Tbilisi to push forward recommendations on the restructuring of the Georgia Protected Areas Department (PAD). The team developed written guidelines to reorganize and strengthen the PAD and outlined position descriptions and a training strategy for the PAD. The team also met with the President, Prime Minister, American Ambassador, Minister of the Environment, and Ministers of Finance, Education, Culture and Sports to discuss their recommendations. The team brought high level attention to critical issues facing the management of Georgia's protected areas (Dec 2004).

Operationalizing Existing Management Plans: DOI-ITAP sent a team to Georgia to concentrate to operationalize existing management plans at Vashlovani, Tusheti, and Lagodekhi National Parks (Oct 2003).

Reorganization of Central Office: DOI-ITAP sent a team to Georgia to work with the Georgian protected area central office to initiate reorganization of the central office, help finalize position descriptions, encourage the hiring of new staff, and complete reorganization charts (Oct 2003).

Landscape-Level Planning Technical Assistance: Through DOI-ITAP, USFS personnel provided preliminary training and technical assistance in landscape-level planning (July 2003).

New Mission and Organizational Structure: DOI-ITAP staff prepared a long-term mission statement for Georgia's protected areas management. In addition, they identified changes in legal authorities needed to meet expanded management objectives and drafted a Presidential Decree used to achieve the new organizational structure and mission of the Department. A DOI-ITAP team conducted a workshop with Georgian resource managers and other stakeholders to review the proposed reforms and ensure public participation (Nov 1999).

Institutional Analysis: DOI-ITAP completed an institutional analysis of the Department of Protected Areas, including a cost assessment of the Department's equipment, facilities, and infrastructure improvements (Oct 1998).

Sister Parks: DOI-ITAP established a network of sister parks by linking several national parks in the U.S. with ecologically appropriate counterparts in Georgia. The U.S. parks have provided excess trail-building and maintenance tools and uniforms to their Georgian twins (Nov 1999).

## Field-Level Training

Protected Area Management Training: A team of DOI-ITAP specialists from NPS and USFWS provided 2-weeks of training to Georgian protected area staff on field-level protected area management, law enforcement, and search and rescue, as well as the draft design for law enforcement guide (pocket) book (June 2003).

Lagodekhi Nature Reserve: With program funding, DOI-ITAP has assisted the staff of Lagodekhi Nature Reserve:

- *Published a brochure.* In collaboration with Georgian NGO a bilingual brochure has been published. The purpose of the 30 page color picture brochure was facilitation of marketing communication and education, generally focusing on outstanding ecological values of newly re-designated and territorially expanded oldest Lagodekhi protected Area, that became legally accessible for visitors (June 2005).
- *Design and construct central entrance facilities.* Lavatory facilities have been constructed. A 1.7 km long fence to prevent illegal grazing of livestock has been installed (June 2001).
- *Perform necessary maintenance on an administration building.* The roof has been repaired, with new iron sheeting and rain-gatherers installed (June 2001).
- *Refurbish buildings.* Two buildings near the entrance gate, parking, and other necessary visitation infrastructure at Lagodekhi National Park were refurbished to design specification (June 2001).
- *Design and construct a 4-km central nature trail to the waterfall.* A 14-m long wooden bridge over a small river has been built. Major cleanup and ground works (e.g., excavations, scouring of soil, etc.) on a trail have been completed (Nov 2000).
- *Design a logo and uniform patch for Lagodekhi National Park* (Dec 1999).

## U.S. Study Tours

Alaska Study Tour: DOI-ITAP organized a 2-week study tour in Washington, D.C. and Alaska to show a group of high-level government officials from the Republic of Georgia how the U.S. manages federal lands and protected areas (July 2004).

U.S. Training: Paata Shanshiashvili, head of the World Bank's Project Implementing Unit, and the new PAD director visited the U.S. for training and to participate in planning meetings in Washington, DC (Aug 2003).

Seminars and U.S. Parks Tour: DOI-ITAP officials conducted specially designed park management seminars and tours of U.S. national parks with Georgian park managers and parliamentarians (April 2000).

## **SIGNIFICANT PROBLEMS OR DELAYS**

None

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

*DOI-ITAP is currently recruiting for a variety of protected areas management trainers to conduct priority training during Summer/Fall 2007.*

#### **ADDITIONAL INFORMATION**

Reports are produced following each technical assistance assignment. Reports describing the results of DOI-ITAP technical assistance in Georgia are available upon request.



## **GUATEMALA/MIRADOR-RIO AZUL**

### **Sustainable Tourism Development**

#### **SUMMARY OF ASSISTANCE**

DOI-ITAP is providing technical assistance on multiple aspects of park and visitor management at the Mirador-Río Azul Natural and Cultural Zone (herein referred to as the MRA Zone, which includes the Mirador-Río Azul National Park), located within the Maya Biosphere Reserve in northern Guatemala. El Mirador, the central archaeological site in the western portion of this Zone, has been identified as one of the oldest and largest Maya archeological sites in Mesoamerica. Many other significant Maya archeological sites—all located within the largest tract of intact tropical forests remaining in Guatemala—have been investigated in this Zone. These important attractions and recent media attention have led to an increase in tourist visitation to the area and engenders a requirement for a well-coordinated effort among the numerous public, private, and community stakeholders to plan and implement sustainable tourism strategies in this area.

For this project, DOI-ITAP is working as a direct advisor to the Government of Guatemala (GOG) to specifically: (1) strengthen the management and protection of the MRA Zone; and (2) build the capacity within the GOG and the local gateway communities to provide visitor guide and other services, thus ensuring that the tourism is economically beneficial. Although DOI intends to focus its efforts on the western Mirador section of the Zone, DOI will design its activities and work closely with other key entities to help improve the management and protection of the entire MRA Zone. This is a strategy that could serve as an example for other protected areas in the region. DOI will direct its initial assistance on the following main components:

- park planning and administration;
- visitor education and orientation;
- visitor and park guard infrastructure design & construction;
- strengthening of gateway communities in the area; and
- resource and visitor protection/security.

#### **FUNDING**

Global Heritage Fund (GHF) and Foundation for Anthropological Research and Environmental Studies (FARES) in FY' 07

#### **RESULTS TO DATE**

##### **Resource & Visitor Security (Law Enforcement)**

Law Enforcement Assessment: DOI-ITAP conducted a 2-week Law Enforcement assessment of the Mirador section of the MRA Zone to determine capacity and equipment needs. DOI-ITAP will use these findings to prepare for the future law enforcement training of park guards of this area (Sept 2006).

#### Success Story

With USAID/Guatemala funds in 2004, DOI-ITAP procured several satellites and weather stations for its ongoing firefighting support in the Petén region. This equipment, operated by the Guatemalan Government in cooperation with the NGO Wildlife Conservation Society (WCS), has been critical in strengthening Guatemala's ability to detect and predict fire threats at the ground level and has facilitated the creation of the Mesoamerican Regional Visualization and Monitoring System. This support is critical given the limited manpower in the region and the significance of the threatened resources. This equipment continues to play a critical role in the overall protection of the Maya Biosphere Reserve natural resources, including those of the Mirador-Rio Azul Zone.

#### **Park Infrastructure Design**

*A DOI-ITAP team consisting of two experts traveled to Guatemala to help the GOG begin developing a master plan for Mirador-Rio Azul National Park. Specifically, the team reviewed the planning issues developed by the GOG to ensure that they conform to the planning criteria, and are clear and ranked by management priority (April 2007).*

*Two DOI-ITAP teams consisting of two experts each was sent to help the GOG and DOI partner organizations develop the capabilities of local communities to provide visitor related services in Mirador-Rio Azul National Park (MRANP) (May/June 2007).*

The DOI-ITAP infrastructure team completed the draft conceptual designs of the basic infrastructure for visitors, visitor guides, and park guards to be built in the western portion of the MRA Zone. These conceptual designs were approved by the Cross-Sector Roundtable during the February meeting (Feb 2007).

#### **Park Interpretation**

*A DOI-ITAP park ranger traveled to Guatemala to provide basic interpretive planning that lines out what interpretive products will be produced this year. This planning effort focused on non-personal media (i.e., not guide training) (April 2007).*

A DOI-ITAP interpretive specialist is working closely with IDAEH and FARES archeologists who have worked in the MRA Zone to begin designing the first eight to ten interpretive panels for the El Mirador site. IDAEH has required that these panels be designed, constructed, and installed on a priority basis to begin providing tourists information on the cultural resources (ongoing).

#### **Stakeholder Coordination and Consensus Building:**

*A DOI-ITAP employee attended the May 2007 Mirador-Rio Azul Roundtable Meeting, which brought in 80+ stakeholders, including high and mid-level representatives of the GOG, NGOs,*

*and local communities. Several presentations on DOI results to date were made including: (1) draft final park infrastructure construction drawings to be built at the El Mirador archeological site; (2) draft sketches of the eight interpretive panels to be installed at El Mirador archeological site; and (3) outline the law enforcement evaluation findings for the entire Maya Biosphere Reserve, all products of recently returned DOI teams. Meetings were also held with a local Guatemalan park management expert to determine whether that person should serve as the DOI in-country representative, someone who could help steer the park master plan development effort as well as provide the necessary logistics for the future DOI teams (May 2007).*

MRA Zone Cross-Sector Roundtable: Due to the intense historical conflicts over the use of the natural and cultural resources in this Zone and the intrinsic and potential economic value of these resources, the GOG partnered with local NGOs to create a formal Cross-Sector Roundtable for the MRA Zone. The Roundtable functions as a venue for collaboration and consensus building amongst the various stakeholders interested in the MRA Zone. The Roundtable held its first meeting in November 2006 and has been meeting on a monthly basis since, successfully building bridges between the numerous stakeholders and advancing the sustainable development of the Zone. Members of this Roundtable include all national and local level GOG agencies, international and local NGOs, and local communities interested in contributing to this effort. DOI-ITAP participates as an observer and advisor.

- DOI signed Declaration of Good Intentions: The GOG, Balam (a local environmental NGO), and ACOFOP (a local NGO representing the community forestry concessions) co-hosted a ceremony for the signing of a “Declaration of Good Intentions” for the conservation and sustainable development of the MRA Zone through the establishment of the MRA Zone Multi-Sectoral Roundtable. DOI signed the Declaration as a collaborating entity and witness to the event, an event in which Guatemala’s President and the relevant Ministers participated (Oct 2006).

DOI Workplan: DOI-ITAP drafted a 4-year Workplan as a mechanism for communicating its role, responsibilities, and areas of expertise in an open, inclusive, and transparent manner. The drafting of this Workplan required multiple steps and extensive collaboration, some of which is described in the bullets below:

- DOI Workplan Approved: DOI Workplan and implementation timelines are revised according to Roundtable feedback and finalized and approved by the GOG and MRA Zone Cross-Sector Roundtable (Feb 2007).
- Draft DOI Workplan: In coordination with the GOG, NGOs, and the local communities, a multi-disciplinary DOI-ITAP team began the initial phases of park management and visitor infrastructure planning, community tourism strengthening, and visitor education and interpretation. This team included a landscape architect, a civil engineer, an ecotourism specialist, a community development specialist, a visitor interpretation specialist, a park planner, and a technical lead. The specific activities identified by this team and a timeline for their implementation were incorporated into a DOI Workplan. During this trip, DOI formally shared this Draft Workplan with the GOG, NGOs and the

Carmelita community at the first MRA Zone Cross-Sector Roundtable meeting (Oct/Nov 2006).

- Initial Site Evaluation: A DOI-ITAP management team hiked through the western section of the MRA Zone to learn first-hand about the area in order to identify and prioritize a potential course of activities over the next 4 years. Detailed information about the area and its stakeholders was also obtained through meetings with mid-level GOG regional representatives from Peten, the community of Carmelita, and key NGOs (June 2006).
- Introduction of DOI to GOG: DOI-ITAP met with high-level GOG representatives in Guatemala City to present DOI-ITAP's proposed role and general plan of assistance for the MRA Zone and to solicit feedback (March 2006).
- Decision to Provide Assistance: DOI-ITAP conducted meetings and an initial assessment of the El Mirador archeological site in order to determine the appropriateness of bringing U.S. Government assistance to this area (Jan 2006).

Formal Agreements: To further define DOI's role and responsibilities, DOI participated in the signing of key formal agreements, including a significant one between the two governments, as outlined below:

- GOG added Ministry of Defense to DOI-GOG MOU: The DOI-GOG MOU, which was signed by only two of the GOG agencies in Washington, DC, (see Sept 2006 bullet below) was signed by the remaining GOG agencies in a signing ceremony attended by the Guatemalan President in Guatemala City. Further, to highlight the GOG priority for strengthening security in the MRA Zone, the GOG added the Minister of Defense as a signatory (Jan 2007).
- DOI-GOG MOU Signed by DOI Secretary: In an event held in Washington, DC, DOI Secretary Kempthorne signed a 10-year MOU with the GOG on behalf of DOI for the conservation and sustainable development of Guatemala's natural and cultural resources ([http://www.doi.gov/news/06\\_News\\_Releases/060918a.html](http://www.doi.gov/news/06_News_Releases/060918a.html)). The DOI-ITAP work proposed for the MRA Zone will be the first collaborative effort to take place under this MOU. The Guatemalan President's Chief of Staff and a representative from the Minister of Culture signed on the GOG's behalf. Also present at the signing ceremony were representatives of the Guatemalan private, non-governmental, and community sectors (Sept 2006).

### **Public-Private Partnerships**

U.S. Models: DOI-ITAP hosted a Guatemalan representative of the private sector, who is in the process of establishing an NGO that would help fund the archeological investigative and restoration work being conducted at El Mirador and other nearby archeological sites. DOI-ITAP coordinated meetings with NPS partnership experts and key NGOs (such as the National Park Foundation and the National Parks Conservation Association) to discuss the various public-

private partnership models used in the U.S.; how the NPS contracts and manages the private sector (e.g., businesses that provide visitor services within parks) on its lands; and lessons learned (July 2006).

#### **Coordination with NGOs and UN**

DOI at GHF Board Meeting: DOI-ITAP attended a GHF Board of Directors meeting in New York City to present its role in Mirador (Sept 2006).

World Heritage Site Nomination: The GOG has been coordinating with the United Nations Educational, Scientific, and Cultural Organization (UNESCO) to nominate the entire Mirador-Río Azul Natural and Cultural Zone as a world heritage site for cultural and natural resources. As a result, the GOG has requested that the DOI's efforts, initially focused on the MRA National Park and access trail, to be expanded to the entire MRA Zone (Aug-Sept 2006).

#### **SIGNIFICANT PROBLEMS OR DELAYS**

None - The Guatemalan presidential campaigns have begun and the election of a new administration may have an impact on the progress of this project.

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

A DOI-ITAP infrastructure team will work at the site with counterparts to finalize construction plans and specifications, ensure the proper materials are available, and handle other logistics so that the actual construction of the infrastructure can begin. It is hoped that the infrastructure construction will be completed before the end of 2007.

A DOI-ITAP transportation team will provide technical assistance to evaluate the various park access options to the El Mirador site, defining feasibility and estimating impact to resources and local communities, as well as costs.

#### **ADDITIONAL INFORMATION**

Reports are produced following each technical assistance assignment. Reports describing the results of DOI-ITAP technical assistance in Guatemala-Mirador are available upon request.

## **INDIA**

### **Coal Processing in the Asia-Pacific Region**

#### **SUMMARY OF ASSISTANCE**

DOI-ITAP has signed an Interagency Agreement with the State Department to host a workshop in India to review existing regulations and practices for coal processing in the Asia-Pacific region and develop recommendations for optimum ash and sulfur reduction in washed coal. This work will be conducted under the auspices of the Asia-Pacific Partnership on Clean Development and Climate—an effort to accelerate the development and deployment of clean energy technologies. Founding partners (Australia, China, India, Japan, Republic of Korea, and the U.S.) have agreed to work together and with private partners to meet goals for energy security, national air pollution reduction, and climate change in ways that promote sustainable economic growth and poverty reduction.

#### **FUNDING**

State Department in FY'06

#### **RESULTS TO DATE**

##### ***Australia:***

***A DOI-ITAP employee attended a meeting of the CMFT Health and Safety Working group to finalize five projects for implementation under the CMFT's endorsed action plan. The CMFT is one of eight taskforces under the presidential initiative Asia Pacific Partnership for Clean Development and Climate (April 2007).***

Workshop topics have been discussed with Indian governmental and private sector officials. A tentative date has been selected.

#### **SIGNIFICANT PROBLEMS OR DELAYS**

The original dates for the workshop have slipped in response to requests from the Indian government.

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

Workshop logistics will be finalized; presenters and material will be chosen. DOI-ITAP will collaborate with Indian counterparts on conference specifics. A team of selected experts will travel to India in Summer 2007 to conduct the workshop.

#### **ADDITIONAL INFORMATION**

No reports are available on this project.

## **JORDAN**

### **Cultural Resource Interpretation**

#### **SUMMARY OF ASSISTANCE**

DOI-ITAP is working in collaboration with the Jordan Ministry of Tourism and Antiquities and a USAID-funded Jordan Tourism Project, Siyaha, to upgrade the visitor experience at the Madaba Visitor Center, archaeological park and other key tourism sites in the City of Madaba.

#### **FUNDING**

State Department Bureau of Oceans, and International Environmental and Scientific Affairs  
FY'06

#### **RESULTS TO DATE**

*A DOI-ITAP team consisting of two interpretation experts traveled to Jordan to assist the consultant and the work team of students in preparing exhibit panels for the Madaba Visitor Center and conduct workshops on interpretation. (April/May 2007).*

A team of three DOI interpretation experts -- Larry Belli, a retired NPS superintendent; Michael Whatley, Chief of National Park Service's Natural Resources Program Center, Office of Education and Outreach; and Ralph Jones, Chief Ranger (Interpretation and Protection) at Natural Bridges and Hovenweep National Monuments -- traveled to Jordan December 1-15, 2006. While on assignment the team consulted with numerous Jordanian representatives and developed a draft Madaba Interpretation Plan, a 38-page manual with recommendations for interpreting the major tourist sites in this ancient town near Amman. Included among the sites are the Siyaha Building and the Visitor Center (Dec 2006).

#### **SIGNIFICANT PROBLEMS OR DELAYS**

The return travel to Jordan of a team of two interpretation experts was later than originally planned because a Jordanian consultant needs to be hired to design and construct the recommended interpretation program. The consultant is expected to hire Jordanian students who will learn the process of interpretation that can be applied to other sites. The privatization efforts have been delayed until the improved interpretation programs can be completed and demonstrated to be successful. The USAID program operating in the area will develop the concession agreements to privatize some of the governmental activities under its ongoing program.

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

#### **ADDITIONAL INFORMATION**

The Draft Madaba Interpretation Plan is available upon request.

## *Mongolia Water Supply*

### SUMMARY OF ASSISTANCE

*The U.S. Geological Survey (USGS)/DOI is working with the Millennium Challenge Corporation (MCC) to conduct due diligence on the proposed Mongolia Compact proposal that would provide approximately \$200 Million in grant funding to support economic growth and poverty reduction throughout the country. The Mongolia Compact proposal includes a Land and Property Rights Project that is projected to cost approximately \$25 Million. The objective of the proposal is to promote development of farming-based community settlements with adequate infrastructure in peri-urban areas to create jobs and adequate living conditions for rural in-migrants to prevent uncontrolled sprawling of suburban ger (portable housing used by nomads in Mongolia) areas and further land degradation. MCC funding will be used for undertaking land tenure reform, capacity building for local government offices and households to effectively utilize peri-urban land, and improving water supply in peri-urban areas. Addressing land tenure, capacity building, and water supply will remove key constraints in improving farming technologies and stimulate development farming-based settlements with basic infrastructure such as renewable energy sources and simple environmentally friendly waste removal.*

### FUNDING

*Funding from the Millenium Challenge Corporation in FY'07*

### RESULTS TO DATE

*The USGS was tasked with reviewing the environmental issues of the Land and Property Rights Project for the Mongolia Millennium Challenge Account (MCA) proposal. Special emphasis was placed on evaluating the effects of the construction of new wells and/or the rehabilitation of old wells on the environment and the inhabitants of the surrounding areas. As part of this task, the USGS reviewed available geohydrologic information in the project area prior to conducting a site visit. The review consisted of summarizing the geohydrology of the project area in the Selenge River Basin, documenting available geohydrologic data, and reviewing existing relevant laws, regulations, and procedures that pertain to the project. The review delineated data gaps that, if filled, would help evaluate the effect of the project on the environment and the local inhabitants. A site visit was completed in Mongolia during May 7–18, 2007, to complete final due diligence on environmental and social issues arising from the Mongolia MCA proposal.*

*During the mission, the team interviewed specialists, administrators, academics, and local residents to obtain information and perspectives on the proposed project. The team participated in fieldtrips of the Ulaanbaatar, Darkhan, and Erdenet peri-urban areas. The team prepared a report that updates and refines the geohydrologic data collected as part of the pre-trip report with data collected during the site visit. In addition, relevant laws, regulations,*



*and procedures that pertain to the project have been reviewed and updated. Data gaps that remain after the site visit are delineated and the source and estimated costs of filling these data gaps are presented. Finally, the answers to the environmental and social assessment due diligence questions pertaining to water resources are discussed.*

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#### *Summary of Major Findings and Recommendations*

*In order to evaluate the environmental issues of the Land and Property Rights Project for the Mongolia MCA proposal, the geohydrology of the Selenge River Basin was reviewed and summarized. Major findings of the geohydrology review are:*

- *The annual precipitation ranges from 250-400 mm/yr. On the average, 70 to 90 percent of the precipitation is lost to evapotranspiration. About 6 percent of the average annual precipitation becomes recharge.*
- *Major development of grassland soil into intensive cultivation for grains and other crops would likely result in severe wind erosion and substantial degradation of the soils because of the light character of the soils.*
- *Most of the streamflow in the basin is the result of rainfall runoff, with most of the runoff occurring in the summer months. The Selenge River Basin is prone to floods during heavy rainfall events in the summer.*
- *Ground-water resources comprise 80 percent of the annual water supply in Mongolia and 91 percent of annual water supply for domestic and municipal use.*
- *Three major hydrogeological units or aquifers have been identified in the Selenge River Basin: (1) intergranular or alluvial aquifers; (2) fissured limestone aquifers; and (3) bedrock aquifers. Most ground water used for municipal, industrial, and irrigation supply is obtained from the highly productive alluvial stream-channel aquifers.*
- *The bedrock aquifer is divided into rocks with limited ground-water resources and rocks with essentially no ground-water resources. Wells drilled in areas mapped as bedrock aquifers with limited ground-water resources have a relatively high probability of yielding sufficient water for domestic supply. Areas mapped as containing essentially no ground-water resources would require additional geohydrologic investigation to determine the potential for obtaining sufficient water for domestic supply if wells were to be drilled in these areas.*
- *The depth to water in the bedrock aquifer is variable, generally increasing in depth away from the topographic low points along the stream channels that drain the basin.*
- *Most wells located in pasturelands in the highlands area of the Selenge River Basin are hand-dug wells in shallow alluvial deposits. The shallow aquifer is susceptible to periods of drought due to the limited recharge area and storage capacity of the aquifer.*
- *The lack of pastureland wells has created overgrazing conditions in the pastureland surrounding operating wells. The Ministry of Food and Agriculture initiated a program in 2004 to drill new pastureland wells and rehabilitate destroyed wells to relieve the overgrazing problem. The average cost of drilling a 50 m deep new well is \$8,000 and the average cost of rehabilitating a destroyed well is \$3,000.*
- *Many rural wells do not have proper sanitary seals, allowing untreated human waste and animal manures to contaminate wells. Shallow, hand-dug wells, are especially vulnerable to contamination from human and animal waste.*

*Relevant laws, regulations, and procedures that pertain to the environmental issues of the Land and Property Rights Project were reviewed. Major findings of the review are:*

- *The Mongolian government has established 40 protected areas in Mongolia where it is prohibited to construct buildings or disturb the land, vegetation, or water resources.*
- *The Water Law that was adapted in 1995 and was amended in 2004 integrates river basin management practices with the goal of better utilizing water resources while protecting ecosystems.*
- *The Water Authority was mandated by the 2004 amended Water Law to inventory all the wells in Mongolia and develop a database.*
- *The Water Law requires that individuals submit a request to drill a well to the soum or aimag governor but are not required to complete an environmental assessment of the water use.*
- *The Water Law requires that individuals or organizations using water for industrial purposes submit an application for water utilization to the soum or aimag governor that includes an environmental assessment of the water use.*
- *The Water Law requires a 100 m sanitary zone surrounding municipal or centralized supply wells.*

*Major data gaps identified in the review include the following:*

- *Historical well construction, water-level, and water-quality data need to be compiled and evaluated for the project area. These data are needed to help evaluate the water availability and potential environmental impacts of the Property Rights Project.*
- *The depth to water and water-bearing properties of the bedrock aquifer was not determined during this review. Because most of the potential leaseholds overly the bedrock aquifer, there is a need to gather existing geohydrologic information on the bedrock aquifer.*
- *Ground-water level and water-quality monitoring networks have not been established for the pastureland areas.*

*Major recommendations resulting from this review include:*

- *Deep wells should be constructed in the alluvial and bedrock aquifers instead of shallow wells in the perched alluvial aquifer.*
- *The Property Rights Project should increase the funds allocated to leaseholders for building infrastructure. Interviews with multiple agencies indicate that average drilling costs for deep wells (50 m and deeper) are significantly higher than the \$5,000 allocated for building infrastructure (wells, fences, buildings, etc.) for this project. Because of the expense of constructing deep wells, potential leaseholders may rely on less expensive shallow wells. If only shallow wells were constructed for the project, it would result in wells only being constructed where there is a shallow depth to water. This would not provide a water supply in all areas of the pastureland, which could result in overgrazing. Also, the reliance on shallow wells would result in the project being susceptible to droughts, which could limit the sustainability of the project.*

- *The Property Rights Project should consider contracting the Geoecology Institute or other professional geohydrologists to complete detailed geohydrologic investigations of the bedrock aquifers in Ulaanbaatar, Darkhan, and Erdenet. The geohydrologic investigation should include details on the geology, water-bearing units, available well data, and delineate areas not suitable for well construction.*
- *Geophysical techniques, such as vertical electric soundings, should be utilized to locate wells in bedrock aquifers.*
- *The project should encourage the construction of deep wells with 6 m sanitary seals to reduce the possibility of surface contamination from human and animal waste. Deep wells are more expensive than shallow wells, but they are less susceptible to droughts and more protected from sources of surface contamination.*
- *A sanitary zone should be established around wells constructed for the Property Rights Project to help protect the quality of ground-water resources. Wells should be at least 30 m from septic leach fields, 30 m from animal or fowl enclosures, and 45 m from a seepage pit or latrine. In addition, wells should be located upgradient from known sources of contamination and the top of the casing should be above the grade of known conditions of flooding by drainage or runoff from the surrounding land.*
- *Information on proper waste management and well-head protection should be provided to potential leaseholders.*
- *Courses or seminars should be offered on well maintenance and repair.*
- *Ground-water level and water-quality monitoring networks should be established to effectively monitor the environmental impacts of the Property Rights Project.*
- *A comprehensive Geographic Information System (GIS) database should be developed to help evaluate, manage, and monitor the Property Rights Project.*

#### **Success Story**

This work provided the MCC with the information necessary for objectively assessing the costs of constructing new deep wells in the alluvial and bedrock aquifers within the project area. The GIS developed for this project provided the framework for MCC/MCA to develop a comprehensive GIS to help evaluate, manage, and monitor the Property Rights Project.

#### **SIGNIFICANT PROBLEMS OR DELAYS**

*None*

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

*None - Task completed*

#### **ADDITIONAL INFORMATION**

*Reports describing the results of DOI-ITAP technical assistance in Mongolia are available upon request.*

## **MOZAMBIQUE**

### **Gorongosa National Park**

#### **SUMMARY OF ASSISTANCE**

DOI-ITAP is working with the Carr Foundation at Gorongosa National Park to restore and conserve the park's natural resources and develop the site as a viable tourism destination.

#### **FUNDING**

Carr Foundation in FY'06 – direct coverage of air tickets and per-diem

#### **RESULTS TO DATE**

A DOI-ITAP team traveled to Mozambique to evaluate Gorongosa National Park's technical assistance needs, including those related to the development of the park's hot springs. The team also identified follow-up areas. The team coordinated on-site with representatives from the Carr Foundation (Sept 2006).

DOI-ITAP delivered its reports and recommendations from the assessment trip (Oct 2006).

#### **SIGNIFICANT PROBLEMS OR DELAYS**

None

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

DOI-ITAP is working with the Carr Foundation to develop a Memorandum of Understanding and determine next steps in technical assistance. This MOU would cover the work of a USGS hydroecologist, who has been in contact with the Carr Foundation to discuss the technical details of such an MOU.

#### **ADDITIONAL INFORMATION**

Reports describing the results of DOI-ITAP technical assistance in Mozambique are available upon request.

## **MOZAMBIQUE**

### **Tourism Development**

#### **SUMMARY OF ASSISTANCE**

DOI-ITAP is working with Nathan Associates and USAID/Mozambique to support the development of natural and cultural resource-based tourism opportunities in Northern Mozambique.

#### **FUNDING**

USAID/Mozambique in FY'07

#### **RESULTS TO DATE**

A DOI-ITAP team engaged in an assessment of research and development activities in and around Pemba Bay, a major historic and cultural resource of Northern Mozambique. Pemba Bay is a complex ecosystem that provides habitat for a wide variety of aquatic life. They identified gaps in the research, and provided recommendations on further studies to be conducted. They assessed the multiple uses of the Bay, including tourism and recreational uses, and provided recommendations for taking an integrated approach to Bay development. They also provided recommendations on steps needed to protect the Bay. Finally, they developed recommendations for further DOI-ITAP technical assistance at the site (Oct 2006).

A GIS specialist is identifying baseline natural resource datasets for Pemba Bay. Information is being gathered for terrestrial and marine areas of the Bay and its watershed and will include GIS datasets, databases, models, reports, and imagery.

#### **SIGNIFICANT PROBLEMS OR DELAYS**

None

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

A senior cave management specialist with overseas experience will travel to Mozambique to assess and develop a management plan designed to arrest any further deterioration of rock art at cave sites, and help preserve the cave sites and integrate existing traditional uses with public access for purposes of education and tourism visitations.

Two land use planners have been identified to potentially provide technical assistance in Summer/Fall 2007.

#### **ADDITIONAL INFORMATION**

Reports describing the results of DOI-ITAP technical assistance in the Mozambique are available upon request.

## **MOZAMBIQUE**

### **Water and Sanitation**

#### **SUMMARY OF ASSISTANCE**

*The U.S. Geological Survey (USGS) is working with the Millennium Challenge Corporation (MCC) to conduct implementation planning on the Mozambique Compact proposal for \$650 Million over 5- years to increase the productive capacity and improve the investment climate in the four northern provinces of Mozambique – Cabo Delgado, Niassa, Nampula, and Zambezia – the poorest regions of the country. The proposal focuses on water and sanitation and private sector development. Specific projects include: water and sanitation, roads, improved land administration, a private credit bureau, agribusiness development, alternative dispute resolution mechanisms, and cross-cutting policy reforms and capacity building initiatives.*

#### **FUNDING**

*MCC in FY'07*

#### **RESULTS TO DATE**

*None*

#### **SIGNIFICANT PROBLEMS OR DELAYS**

*None*

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

*None*

#### **ADDITIONAL INFORMATION**

*None available*

## **Namibia**

### **Natural Resource Tourism Development**

#### **SUMMARY OF ASSISTANCE**

In 2006, DOI-ITAP began working with the Millennium Challenge Corporation (MCC) to provide technical assistance to the Government of Namibia (GoN). The GoN submitted a Compact Proposal that incorporates tourism and natural resource conservation as part of its larger economic development and growth plan. The MCC enlisted the expertise of DOI to conduct a due diligence assessment of several key areas relating to the tourism and conservation components of the proposal, including:

- Establishment of 11 tourism and information hubs;
- Building of bush-access and 4x4 game-viewing tracks;
- Creation of five new high value game breeding camps;
- Development of 11 new tourism and natural resource management service centers;
- Management of boundary conflict using improved fencing and development of wildlife water points;
- Recovery of natural resource assets; and
- Creation of a tourism house.

The MCC anticipates at least one trip to Namibia to conduct this assessment, with the possibility of additional follow-up work.

#### **FUNDING**

Millennium Challenge Corporation

#### **RESULTS TO DATE**

A team consisting of DOI-ITAP and USDA Forest Service (USFS) technical experts and MCC staff, conducted an initial assessment of the seven tourism and natural resource conservation components of the Namibian proposal that are listed above, analyzing not only the technical feasibility of the projects, but also the economic and social impacts on the surrounding communities and the environmental impact on affected species and ecosystems. DOI-ITAP and its partners in USFS delivered their report and assessments to MCC. The team concluded that although there were several areas to be worked on in the future, including closing environmental policy and regulation gaps, ensuring compliance with MCC environmental indicators, encouraging investment from the conservancies that are linked to the national parks, and training and planning efforts, the overall proposal was sound (March 2007).

*A team of DOI-ITAP and USDA Forest Service (USFS) technical experts and MCC staff conducted a second field assessment to conduct further inquiries into the game breeding camps and an economic analysis of the proposed activities (May 2007).*

## **SIGNIFICANT PROBLEMS OR DELAYS**

None

## **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

*An expert will be asked to:*

- 1) Advise MCC on the ideal set of safeguards that should be in place to ensure that the Namibian's proposed Indigenous Natural Products project adheres to international standards -- particularly for any CITES listed species that may be included in the activity.*
- 2) Assess the reality on-the-ground of Namibia's ability to adhere to that ideal set of standards.*
- 3) Advise MCC on what language should be incorporated in the Project compact vis-a-vis appropriate safeguards to ensure compliance with CITES for any CITES listed species that may be included in the activity. Alternatively, advise MCC that it is inadvisable to pursue this activity at this time or specifically exclude CITES species from being funded under the project.*

## **ADDITIONAL INFORMATION**

Reports are produced following each technical assistance assignment. Reports describing the results of DOI-ITAP technical assistance in Namibia are available upon request.



## **NILE BASIN**

### **Collaborative Water Resource Management**

#### **SUMMARY OF ASSISTANCE**

The ten states that share the waters of the Nile Basin have created the Nile Basin Initiative (NBI)—an organization in Entebbe, Uganda—to coordinate their efforts. Within the NBI, several sub-basin coordinating bodies and project implementation offices have been established to carry out NBI's project implementation. The staffs of these institutions require training in diverse disciplines and familiarization with the work of similar bodies in the international community. To that end, DOI-ITAP hosted a study tour to various national and international institutions in the U.S. for NBI staff and members and provides continuing technical assistance.

#### **FUNDING**

State Department, Oceans, Environment and Science Initiative in FY'03

#### **RESULTS TO DATE**

##### **Meetings**

DOI-ITAP participated in the third Donors and Partners Meeting of the NBI in The Hague, October 24-25, 2005. DOI-ITAP, a recognized NBI partner, participated in the meetings to strengthen U.S. Government involvement in the NBI and its sub-basin coordinating bodies. DOI-ITAP also met with donors and partners to discuss ways the Department can continue its program of technical assistance to the NBI.

##### **Study Tour**

Twelve members of the NBI Equatorial Lakes Subsidiary Action Programme (NELSAP) participated in a 2-week water resource management study tour in the U.S. The study tour began in the Washington, DC area and moved west to follow the Columbia River from the Grand Coulee Dam to one of the River's tributaries near Corvallis, Oregon. Two themes were addressed in the context of water resource management: institution building and developing interdisciplinary awareness and coordination. Through seminars and site visits, the study tour group learned how a variety of water resource management and associated organizations operate on a daily basis, including:

- International: The International Boundary and Water Commission, the International Joint Commission, and the World Bank
- Federal: The U.S. Bureau of Reclamation, the Army Corps of Engineers, the U.S. Fish and Wildlife Service, the National Invasive Species Council, and the Bureau of Indian Affairs.
- Federal/Private: Bonneville Power Administration.
- State and Local: Potomac River Basin Commission, Oregon watershed units.
- University Researchers: Oregon State University.

During these meetings, study tour participants analyzed case studies of water resource management issues for several transboundary rivers in the U.S. Next, the group participated in an in-depth study of the various components of water resource management along the Columbia River, including: river and dam operations; hydropower; flood control; fisheries; indigenous rights; recreation; agriculture/irrigation; aquatic invasive species; international benefits sharing; and transboundary management. DOI-ITAP submitted a status report on the study tour to the State Department.

**SIGNIFICANT PROBLEMS OR DELAYS**

None

**MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

None

**ADDITIONAL INFORMATION**

Reports describing the results of DOI-ITAP technical assistance in the Nile Basin are available upon request.

## **PHILIPPINES**

### **Environmental Law Enforcement**

#### **SUMMARY OF ASSISTANCE**

DOI-ITAP is providing technical assistance and training to increase the capacity of local and national environmental law enforcement bodies in the Philippines. This work builds on previous law enforcement training conducted by DOI-ITAP in the Philippines. It supports the USAID/Philippines goal to strengthen the ability of national and local government units and communities to address these critical threats to the country's coastal and terrestrial resources and promote good governance – transparent and accountable – in enforcing environmental laws.

#### **FUNDING**

USAID/Philippines in FY'06  
USAID/Philippines in FY'05  
USAID/Philippines in FY'04  
EAPFI in FY'99

#### **RESULTS TO DATE**

##### **High-Level Law Enforcement Policy and Operations**

Environmental Law Enforcement Summit: USAID/Philippines and DOI-ITAP planned and delivered the first Environmental Law Enforcement Summit held in the Philippines. The successful event, hosted by the Secretary of the Environment and Natural Resources, focused on strategies to increase the efficiencies and effectiveness of enforcing the environmental laws—including those related to natural resources and contamination. A multi-government agency Understanding was signed as a testament to their commitment to this effort (Aug 2006).

##### *Success Story*

One month after the first Environmental Law Enforcement Summit, well-coordinated multi-sectoral efforts between the Philippines Government, NGOs, and local communities resulted in two large and high-profile crackdowns on illegal environmental activities: one on logging and one on hazardous waste dumping. The unprecedented communications and coordination between these various sectors—which also combined financial resources to conduct these crackdowns—was possible only after the Philippines Government clearly demonstrated its commitment to environmental law enforcement at the Summit.

##### **Marine Law Enforcement Training**

Train-the-Trainer Law Enforcement Training: DOI-ITAP conducted a 1-week workshop with a wide array of representatives on the investigative roles within environmental

enforcement in the Philippines. DOI-ITAP teamed with trainers from USAID, FISH Project, Philippine Environment Governance, Tanggol Kalikasan, WWF-Philippines, and other NGOs to conduct the Training on Natural Resources Law Enforcement for Managers. This workshop focused on two pressing needs: (1) capacity-building for agencies' investigative roles, and (2) investigative management skills for mid-level staff (Dec 2005).

Follow-up Law Enforcement Basic Training: DOI-ITAP conducted follow-up law enforcement training in February 2004. The trainees were drawn from several local and national jurisdictions and the training focused on marine law enforcement (March 2004).

Law Enforcement Basic Training: A DOI-ITAP team of two marine law enforcement specialists conducted a 2-week training in basic marine boating and law enforcement skills in Batangas Province, Philippines. The training included participants from "Bantay Dagats" (local marine patrols) and NGO representatives who have responsibilities in marine law enforcement near shore waters and marine protected areas. Experts from DOI-ITAP and several Philippine government agencies and NGOs led the training sessions. The sessions included training in basic patrol and arrest techniques, fish identification, local marine law, interagency coordination, and basic boating and safety (Feb/March 2000).

#### Success Story

The World Wildlife Fund in the Philippines reported that the local Bantay Dagat (sea watch patrol teams) were very pleased with the DOI training in 2000:

"The training has greatly helped in improving the capacities of the local Bantay Dagat ... They spoke highly of the hands-on training (activities) such as those on board and search, charting and navigation, and apprehension. One key highlight of the Bantay Dagat operations in Mabini and Tingloy...is that there are no more commercial vessels encroaching in the municipal waters of Mabini and Tingloy. As a result, the municipal fishermen are able to catch more fish (both in terms of quantity and species of fish) and ... do not need to fish too far."

Marine Law Enforcement Assessment: A DOI-ITAP team completed a needs assessment and curriculum design assignment in the Philippines to prepare for skills training in marine law enforcement for Philippine governmental agencies and NGOs with jurisdiction and responsibility in protecting the marine environment (Dec 1999).

#### Program Management

*A DOI-ITAP team consisting of two experts traveled to the Philippines to conduct a mid-program review of DOI-ITAP activities in the country and met with key Filipino law enforcement officials and USAID/Philippines staff (April 2007).*

Study Tour to the U.S.: DOI-ITAP hosted a USAID/Philippines representative and the DOI in-country representative for 2-days of meetings in Washington, DC. The guests learned about the US Fish and Wildlife Office of Law Enforcement's various capabilities that may be

modeled in the Philippines, as well as Office of Surface Mining's environmentally protective mining practices (Dec 2006).

DOI-GOP MOU: DOI-ITAP has signed a MOU with the GOP that underscores U.S. Government commitment to assisting the GOP with its coastal and forest resource law enforcement (Jun 2006).

Selected In-Country DOI-ITAP Representative: DOI-ITAP selected Mr. Asis Perez, a Filipino Environmental Attorney who heads up the NGO Tanggol Kalikasan, to serve as the in-country DOI-ITAP representative. Mr. Perez will coordinate and communicate with the Government of the Philippines (GOP), as needed, on DOI-ITAP-related activities (March 2006).

Environmental Law Enforcement Needs Assessment: A DOI-ITAP team consisting of a DOI-ITAP Project Manager and two Law Enforcement Special Agents conducted this initial assessment to determine how DOI-ITAP can best assist the various Philippine government agencies and NGOs to improve their law enforcement capabilities that combat illegal natural resource extraction and degradation of its coastal marine and upland timber resources. This team met with numerous Philippine and US entities (including the US Embassy) and key law enforcers from the Ministry to the village level. While in country, the Philippines press published a news article outlining the intent of having DOI-ITAP assist the Philippine government over the next 3 years (March 2005).

#### **SIGNIFICANT PROBLEMS OR DELAYS**

None

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

*In the fall of 2007, DOI-ITAP will host USAID/Philippines and other representatives to the U.S. for a study tour focusing on environmental law enforcement investigative strategies and tools used by DOI.*

#### **ADDITIONAL INFORMATION**

Reports are produced following each technical assistance assignment. Reports describing the results of DOI-ITAP technical assistance in the Philippines are available upon request.

## **TANZANIA**

### **Protected Area Management**

#### **SUMMARY OF ASSISTANCE**

Since 1997, DOI-ITAP has partnered with USAID/Tanzania to deliver a broad range of technical assistance programs to the Government of Tanzania (GOT). This partnership's objective is to improve natural resources management in Tanzania's protected areas. During the past 8 years, DOI-ITAP has provided technical assistance and training on such areas as: wildlife anti-poaching; visitor services infrastructure design, management, and operation; visitor interpretation and education; fire management; roads design and maintenance; radio systems design and installation; patrol boat delivery and training; general assessments of land and marine parks and game reserves; park signs design and construction; and park management study tours for GOT managers to DOI-ITAP sites in the U.S. DOI-ITAP has also delivered a variety of equipment critical to the effective management of protected areas, including: radios; park guard uniforms; boots; camping gear; binoculars; cameras; compasses; maps; GPS units; medical kits; and basic fire fighting tools.

#### **FUNDING**

USAID/Tanzania in FY'06  
USAID/Tanzania in FY'04  
USAID/Tanzania in FY'03  
USAID/Tanzania in FY'01  
USAID/Tanzania in FY'98  
USAID/Tanzania in FY'97

#### **RESULTS TO DATE**

##### **Anti-Poaching (Law Enforcement)**

Law Enforcement Needs Assessment of Tarangire-Manyara Landscape: A DOI-ITAP team conducted a multi-sector law enforcement needs assessment of the various land management entities, both governmental and non-governmental within this landscape. DOI identified potential operations coordination and collaboration strategies, equipment needs, and assisted with drafting a proposal by the African Wildlife Foundation for LE funds (March 2007).

##### **Success Story**

As part of the March 2007 law enforcement trip, a DOI-ITAP team successfully worked with its in-country strategic partners to build alliances for the anti-poaching and broader conservation initiatives. The high level of coordination between the DOI-ITAP team, the USAID mission, and their partners resulted in the completion of a highly collaborative law enforcement needs assessment with the buy-in of the critical Tanzanian and USG partners and facilitated further cooperation on this issue in the future.

Marine LE Training of Local Community Scouts and Patrol Boat Delivery: A team of four DOI-ITAP law enforcement agents trained a team of Bagamoyo district-level coastal scouts in basic marine law enforcement techniques and small-boat operation, maintenance, and safety. In addition to the training, ITAP purchased and delivered a 14-foot fiberglass patrol boat, a motor, and boat accessories to the district for it to use for near-shore law enforcement patrolling and response in the surrounding marine protected areas. The District Commissioner of Bagamoyo and Member of Parliament for Bagamoyo were highly impressed with the DOI-ITAP trainers and the results of the training course. The Acting Ambassador and the USAID Mission Director presided over the boat transfer and graduation ceremony and were very pleased with the results of the training. The Tanzanian press also favorably covered the graduation ceremony (Feb 2004).

LE Training of Marine Protected Area Staff: Three DOI-ITAP staff completed a 2-week law enforcement training to multi-jurisdictional marine protected areas staff in Dar Es Salaam, Tanzania—the first of its kind. USAID/Tanzania and its partners indicated that this is the start of a long term protection program for Tanzania’s Coastal Resources (June 2003).

*Success Story*

As part of the June 2003 marine law enforcement training, the DOI trainers and Tanzanian trainees conducted surprise inspections of three local seashell dealers and seized over 150 kilos of illegal sea coral and parts of five sea turtles. Local news venues reported the operation was the largest seizure of illegal marine products in Tanzania's history.

Village Game Scouts Law Enforcement Training: DOI-ITAP provided the tuition for 30 local village game scouts to attend a government certified natural resource law enforcement training program in an effort to strengthen the management of Tanzania’s protected areas and wildlife. Through this training, the 30 village game scouts also received uniforms, boots, and some basic tools (Sept 2005).

Ugalla Game Reserve Assessment of Previous LE Training and Radio System Installed; Basic Equipment Delivery at Ugalla Game Reserve; and Initial Assessment of the LE Capabilities of two Wildlife Management Areas: Two DOI-ITAP law enforcement experts conducted a natural resource law enforcement assessment of the locally governed Uyumu and Ipole Wildlife Management Areas (WMAs) surrounding the Ugalla Game Reserve. The assessment results will be used to develop a workplan and curriculum for future law enforcement technical assistance that DOI-ITAP will provide to the GOT. The DOI-ITAP team also conducted an assessment of the effectiveness of its previous law enforcement training at the Ugalla Game Reserve and delivered \$2,150 worth of equipment to the reserve, which included binoculars, mosquito netting, and GPS units (Sept 2005).

Ugalla Law Enforcement Training: Five DOI-ITAP law enforcement experts trained 35 Tanzanian Wildlife Division game scouts in anti-poaching techniques, case preparation, personal safety and emergency response, use of compasses and Global Positioning System

devices, and other topics using a combination of class work and field exercises. This effort—the first major training event provided strictly to the Wildlife Division—was completed at the Ugalla Game Reserve, a Wildlife Division managed protected area in the central region of the country (Sept/Oct 2002).

Tarangire and Lake Manyara National Parks: DOI-ITAP law enforcement experts provided a series of law enforcement training sessions at Tarangire and Lake Manyara National Parks. The topics have included: investigation and arrest methods; land navigation using compass and GPS; incident report writing; and basic patrol design. DOI-ITAP teams helped design standardized reporting forms for anti-poaching teams. Each successive training course has built upon the results and findings of previous training (Oct 1998, Feb 1999, Feb 2000, March 2002).

Anti-Poaching Equipment: DOI-ITAP has donated approximately \$60,000 in law-enforcement related equipment to rangers in Tarangire and Lake Manyara National Parks and the Ugalla Game Reserve. The equipment has included camping gear, binoculars, compasses, maps, and GPS units. DOI-ITAP teams assess the use and maintenance of the equipment during repeat visits to the sites.

## **Communications Systems**

Ugalla Game Reserve Radio System: A DOI-ITAP radio expert delivered and installed a high frequency radio communication system to the Wildlife Division (WD) of the Ministry of Natural Resources and Tourism at the Ugalla Game Reserve. This communication system will enable the Wildlife Division rangers to conduct foot/vehicle patrols and search and rescue operations in and around the Reserve. The donated system consists of: (2) Vertex Standard base station radios, (4) high frequency (HF) Vertex Standard mobile radios, and (12) very high frequency (VHF) ICOM portable radios valued at \$25,000. The DOI-ITAP radio expert also trained key WD staff on the use and maintenance of the radios (Jan 2005).

Radio Communication System Assessment: A DOI-ITAP radio expert conducted an extensive assessment at this Reserve to determine the best radio system to purchase and install. This will be the first system of its kind to exist and will enable Ugalla staff to communicate with other government agencies, including TANAPA, for improved collaboration (Feb 2004).

## **Roads**

Training: A DOI-ITAP team worked with TANAPA road staff to complete the design and construction of a new access road and parking lot to newly constructed visitor centers at both Tarangire and Lake Manyara National Parks. The DOI-ITAP team combined this task with on-the-job training for park staff, emphasizing the environmental impact component of these tasks. The DOI-ITAP team also provided the park staff with inexpensive surveying equipment that was formerly unavailable, thus significantly improving their construction capabilities (June 2003).



Training: A series of DOI-ITAP teams have trained TANAPA staff on road construction and repair, as well as the operation and maintenance of roads equipment. Skills training has focused on grading, crowning of roads, establishment of shoulders, sensitivity to water passage, and use of equipment in different soil types. Through field exercises, critical sections of the roads in Tarangire National Park have been repaired (Feb/Mar 1998, June 2000, Jan 2001, Feb/March 2002).

Assessments of Road Conditions: A DOI-ITAP team performed an assessment of the road program in Serengeti National Park and provided recommendations for improvement of that program (Feb/March 2002).

Environmental Assessment: A DOI-ITAP roads engineer participated with a team of USAID contractors and specialists in drafting a programmatic environmental assessment of proposed roads projects in Tarangire and Lake Manyara National Parks. The DOI-ITAP engineer worked intensively for 1-month with a team of experts and produced a draft project environmental assessment for review by USAID and the Tanzanian government at the beginning of March (Feb 2000).

Road Assessment: The road conditions at Tarangire National Park were comprehensively assessed in light of damage due to heavy rains (Feb/March 1998).

## **Fire**

Fire Management Planning: A team of DOI-ITAP fire management experts worked with TANAPA staff to produce a fire management plan for Tarangire National Park (Oct 1999, March 2002).

### **Success Story**

A DOI fire management team worked with TANAPA management specialists to draft the first Fire Management Plan for Tarangire National Park. TANAPA has indicated to DOI that this plan has been incorporated into the General Management Plan for both Tarangire and Lake Manyara National Parks.

Training: Based on DOI-ITAP's assessment of the capacity of Tarangire and Lake Manyara National Parks to suppress wildfires and manage fire in the Parks for ecological objectives, multi-bureau DOI-ITAP fire management teams have conducted training in fire suppression skills for the parks' staff. DOI-ITAP contributed basic fire fighting tools to the parks, and the training sessions incorporated both lecture and field exercise components to build capacity in the parks both to fight wildfires and to manage controlled burns (Jan 1999, Sept 1999, March 2002).

## **Park Infrastructure**

Signs: DOI-ITAP provided Tarangire and Lake Manyara National Parks technical assistance on the design and development of park signage (Oct 2003).

Facility Design Assistance: A design for the Lake Manyara visitor center was developed (July-Aug1999).

### **Park Interpretation and Education**

Visitor Services: A DOI-ITAP team conducted a 2-week course on visitor services and interpretive guide training at Lake Manyara and Tarangire National Parks. The DOI-ITAP team trained eight Tanzanian park staff from four national parks and two AWF staff members in a number of interpretive principles and techniques, including: core concepts of interpretation; fundamentals of interpretive planning; developing theme statements; understanding the learning styles of a variety of audiences; roving interpretation; brochure development; visitor center operation and management; interpretive guide training for guided walks; and environmental education (March 2005).

Interpretation Workshop: A DOI-ITAP team consisting of an architect, landscape architect, and an interpretive specialist worked with TANAPA in an AWF-sponsored workshop on designs for visitor services in Tarangire and Lake Manyara National Parks. The workshop's focus was establishing criteria for approving design concepts for a new visitor center, signage in the parks, and other park infrastructure ideas needed to improve the park experience for visitors (July/Aug 1999).

### **Protected Area Management**

Study Tour to Four DOI Sites: At USAID/Tanzania's request and with full funding from the GOT, DOI-ITAP led three Tanzanian Park Superintendents and the Ecology Chief for the Tanzania government on a 2-week study tour to three U.S. national parks and one wildlife refuge: Lava Beds National Monument, Yellowstone and Sequoia-Kings Canyon National Parks, and Tulelake National Wildlife Refuge. The Tanzanians learned about how the U.S. addresses a variety of challenges and overall visitor management (Sept 2003).

Marine Protected Area Management: DOI-ITAP completed a 1-week evaluation of the marine resources at select Marine Protected Areas (MPAs) near Dar Es Salaam during June 2003. Based on needs and interest expressed, DOI-ITAP recommends that the Tanzanian government adopt an embedment anchor buoy system technology to install replacement demarcation buoys at Mafia Island while conducting an on-the-job training for various Marine Protected Area staff. Another major recommendation is that the government increase its efforts to eliminate drag net fishing—a practice which is destructive to coral reefs (June 2003).

Park Management: A group of Tanzanian resource managers, including the Chief Park Wardens of Tarangire and Lake Manyara National Parks, participated in a U.S. study tour designed to highlight management approaches in relevant ecosystems (Oct 1998).

Marine Protected Area Training: A multi-agency group of Tanzanians associated with Tanzanian marine protected areas participated in a study tour in the U.S. and were trained in

marine protected area management. The participants included officials from the newly formed Mafia Island marine reserve, the Bureau of Fisheries, and the University of Dar Es Salaam. They were introduced to a variety of marine protected area management issues and practices, including visitor services; conservation program management; budgeting; law enforcement; and facilities management. Participants were encouraged to discuss links where practices in the U.S. could be adopted for Tanzanian programs (July/Aug 1999).

#### **Administrative**

DOI-ITAP provided USAID/Tanzania a workplan, in coordination with its partners, for new funds expected in FY'07 (Feb 2007).

*DOI-ITAP participated in USAID's Natural Resources Management/Economic Growth Program Integration Workshop in Bagamoyo. The planning retreat provided a forum to offer input on USAID/Tanzania's plans for merging and integrating its Natural Resources Management (NRM) and Economic Growth (EG) programs and provided feedback on the future direction of DOI's activities with these programs (May 2007).*

#### **SIGNIFICANT PROBLEMS OR DELAYS**

None

#### **MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD**

*It is anticipated that technical assistance needs will be finalized in this quarter.*

#### **ADDITIONAL INFORMATION**

Reports are produced following each technical assistance assignment. Reports describing the results of DOI-ITAP technical assistance in Tanzania are available upon request.

### **3. DOI-ITAP Completed Programs**

#### **Bangladesh – Arsenic Contamination in Bengal Delta Groundwater**

Arsenic contamination in the shallow groundwater of the Bengal Delta in Bangladesh and West Bengal, India, is now recognized as the most significant water-related health crisis in the world. The contamination affects perhaps as many as 40-60 million people. The current primary solutions to the arsenic problem in Bangladesh and West Bengal are avoidance and treatment. DOI-ITAP worked to understand the geology, hydrology, and geochemistry of the contaminated delta sediments in order to address existing conditions and evaluate water management alternatives, including remediation of contaminated shallow aquifers and development of deeper aquifers.

#### **Bolivia – CITES training for Bolivian agencies**

DOI-ITAP coordinated with USAID/Bolivia to provide CITES training to thirty representatives from relevant Bolivian agencies, including the scientific authority, immigration, national police and Interpol. The 1972 CITES convention addressed threats to plant and animal species where international trade in products from such species is a major factor in their decline. By regulating or prohibiting the trade in these products, CITES provides a powerful tool for species protection. Since the successful training, a committee comprised of the armed forces, police, and customs began to properly handle biodiversity issues and placed a special emphasis on wildlife.

#### **Brazil – Partner Parks**

A Partner Parks relationship was established in October 1997 as a result of the U.S.-Brazil Presidential summit between Everglades National Park and Brazil's Pantanal National Park. Through this relationship—facilitated by DOI-ITAP—officials from both parks visited each other and discussed issues related to park management, law enforcement, public affairs, and outreach. Visitors to the Everglades returned to Brazil with a prototype visitor information brochure produced in partnership with the Everglades public affairs staff.

#### **Central America -- Regional Fire Management Program**

At the request of the U.S. Agency for International Development/Guatemala – Central American Programs (USAID/G-CAP), DOI-ITAP provided technical assistance on fire management and forest pest control in eight Mesoamerican countries: Panama, Costa Rica, Nicaragua, El Salvador, Honduras, Guatemala, Belize, and Mexico. Under this program, DOI-ITAP delivered its assistance through:

- Small grants for grass root level fire prevention and control activities

\$320,000 in small grants was disbursed and was matched nearly 1:1 by the recipients.

- Emergency Fire Preparation and Response/Control

DOI-ITAP worked with the Wildlife Conservation Society to strengthen the wildfire prevention capabilities of CONAP and its partner organizations, with a particular focus on the Mayan Biosphere Reserve and Laguna del Tigre National Park in Guatemala. Supported activities included: (1) controlling and monitoring susceptible areas; (2) improving field communications; (3) monitoring hot points on satellite images and evaluating the extent of areas affected by fire; and (4) providing limited support to CONAP's partner organizations. A DOI-ITAP fire expert also conducted an emergency forest fire response assessment at the request of GOG.

DOI-ITAP experts conducted numerous workshops and courses on fire management topics, including: the role of wildland fuels in fire behavior and ecological impacts of fire; basic firefighting skills; dendrochronology and historical fire studies; and forest fire causes. DOI-ITAP also assisted in the development of a fire prevention manual.

➤ Communications systems purchase and installation

DOI-ITAP conducted a workshop in Nicaragua to standardize satellite detection technology and improve the regional sharing of data. A geographic information systems workshop was also conducted in Mexico for Central American and Mexican fire managers on basic aspects of interpreting satellite images for fire detection and response.

➤ Forest Pest Management

Several training courses and workshops were held to train forest managers on the identification of harmful forest pests and to assist the governments in responding to damage caused by these pests. Topics of focus included the evaluation of actual case studies and the creation of a regional network of technical and professional staff to increase cross-border communication of conditions and responses related to forests pests, in addition to sharing of new strategies and technologies.

➤ Economic Valuation

Economic valuation workshops were completed throughout the region to assist the governments in valuing the damages caused by wildfires to natural resources. This training will better enable the governments to recoup damages from wildfires and lead to a better understanding of the positive impact that protected areas and natural resources have on the regional and individual country economies.

### **Colombia – Supporting the Parks System**

In October 1998, the U.S. DOI signed a Framework for Cooperation with the Colombian Ministry of the Environment. With funding from USAID/Colombia, DOI-ITAP and the Colombian National Parks Unit (CNPU) collaborated to improve the Colombian National Park system's overall management. DOI-ITAP and CNPU worked to meet identified needs at the headquarters, regional, and park levels. These needs included: equipment purchase and delivery; infrastructure design, planning, and construction; increased staffing in protected areas; and staff training.

The project helped increase the numbers of protected area contracted staff throughout the Park system, thereby elevating institutional presence in an effort to decrease the negative impacts wrought by illegal human settlements, illegal use of the resources, and drug trafficking. One hundred and fifty-eight staff was contracted under the project, including 50 professionals, 76 local park rangers, and 32 technicians. The most extensive areas in the System (Puinawai, Chiribiquete, Nukak, and Cahuinari) tripled their capacity for coverage and mobility.

The Colombian National Parks Unit identified several critical park operations and infrastructure maintenance needs, such as renting office space; maintaining park infrastructure and vehicles; and providing office supplies and fuel and lodging for park staff within the protected areas and those traveling from headquarters and regional offices. Through this program, DOI-ITAP transferred funds to Columbia's Corporación for Environmental and Cultural Protection and Territorial Code (Corporación) for park operations, infrastructure, and travel/per diem that enables direct contact between national, regional, and park level staff. Corporación purchased fuel and covered tickets/travel expenses in order to guarantee the optimum placement of staff in the field. In addition, Corporación entered into contracts for corrective and preventative maintenance of CNPU vehicles, motorcycles, boats and other park equipment. Eight fences were constructed and installed in Catatumbo Bari. Corporación also performed maintenance of headquarters and control stations at several parks. The headquarters facilities were leased at Las Hermosas.

Two training sessions were conducted. The first session addressed the level of stress that many on-duty Park staff experience as a result of the tenuous security situation in certain parts of the country. The second training was focused on environmental and conservation issues.

Park staff required very basic equipment in order to perform their jobs. CNPU's equipment needs varied from park to park, but typically included such items as vehicles, motorcycles, boats, generators, motors, field gear, computers, GIS equipment, printers, photocopiers, cameras, software, communications equipment, and fire fighting equipment. Through this project, essential equipment such as vehicles, digital cameras, computers, printers, GPS units, and bicycles were procured.

### **Croatia – Ministry of Environmental Protection and Physical Planning**

After regional conflicts during the early 1990s threatened their economy and security, many of Croatia's internationally recognized natural and cultural assets were not centrally managed—placing them at risk. For the first time since the current government came into power in 2000, Croatia has a Ministry of Environmental Protection and Physical Planning with a Nature Conservation Division charged with responsibility for protected areas. DOI-ITAP and the Croatian Ministry of Environmental Protection and Physical Planning signed an Agreement to cooperate on the management of protected areas and the training of their growing professional staff of park managers. In FY'01, DOI-ITAP designed a practical training program focused on parks interpretation, education, and management in Paklenica National Park and Plitvice Lakes National Park, a World Heritage Site. The program implemented critically needed park programs and provided job skills training and temporary employment (the country's current unemployment rate is 22 percent) to twenty interns of diverse ethnicity from war-affected regions. In FY'02,

DOI-ITAP continued its work at three additional parks: Mjlet National Park, Krka National Park, and Lonjsko polje Nature Reserve. Critical equipment and supplies were also provided to the parks, including audio-visual technology for visitor centers; telescopes; microscopes; binoculars; and natural history field guides. Permanent employment was offered to several interns at the parks.

### **Ecuador – Galápagos Island Equipment Support**

Conservation of Galápagos National Park remains a major challenge. In recent years, conflicts between fishermen and local conservation authorities have led to fierce rhetoric, violent action, and pressures from powerful stakeholder groups—all of which can dominate decision-making at the expense of conservation and responsible resource management. DOI-ITAP signed an Interagency Agreement with USAID/Ecuador to provide technical support for enforcement activities to Galápagos National Park. After completing a law enforcement needs assessment, DOI-ITAP procured a Seawolf amphibious plane (single engine, boat hulled) to support Galápagos law enforcement. Park staff was trained on its operation and maintenance. The Guadalupe River, an existing aluminum vessel used for many law enforcement and other purposes by the park staff, was also repaired and retrofitted through a contract facilitated by DOI-ITAP.

### **Georgia – Integrated Coastal Management**

DOI-ITAP provided targeted technical assistance in interpretation under the World Bank/Global Environment Facility's Integrated Coastal Management Project. The majority of the technical assistance was been focused on Kolkheti National Park, West Georgia, which covers an area of 28,571 ha of land and 15,742 ha of marine territory. The park was established in 1999 and incorporates the Kolkheti State Reserve (550 ha; established in 1947), the adjacent wetlands, and Lake Paliastomi. Kolkheti is a designated RAMSAR site.

DOI-ITAP technical assistance was focused on various aspects of interpretation, including:

- Trail design and construction
- Trail interpretation, including signage and brochures
- Visitor facility design, including entry points, kiosks, visitor centers, campsites
- Design of interpretive materials, such as displays, brochures, posters
- Develop public outreach and education programs
- Training in oral interpretation

With the help of DOI experts, educational and informational signs in English and Georgian were developed for Kolkheti and the Kobuleti Nature Reserve. The Georgians identified local sources of fabrication and installation and installed the signs. The Minister of Environment participated in an installation ceremony. DOI experts were also instrumental in reviewing the designs of the Kolkheti National Park visitor center and headquarters, and developing plans for the exhibits. A World Bank-funded study tour that included DOI-managed sites in the U.S. was credited with providing inspiration for the building designs.

## **Guatemala – Mayan Biosphere Reserve**

The 1.5 million hectare Mayan Biosphere Reserve, located in the northern Department (state) of El Petén, forms the core of the largest tract of intact tropical forests remaining in Meso-America. DOI-ITAP worked closely with the USAID/Guatemala office and Consejo Nacional de Areas Protegidas (CONAP)—the Guatemalan protected area management agency—to strengthen protected area management in the Mayan Biosphere Reserve. DOI-ITAP technical assistance in the Reserve was designed to promote and enhance coordination among managing entities within the Reserve and between the U.S. and Guatemalan protected area staff. DOI-ITAP technical assistance was also provided in other geographic areas of the country, including the Volcanoes of Atitlán in the western highlands; the Polochic-Motagua wildlife area in the eastern lowlands; and the Chisec area in northern Alta Verapaz.

Some key results of DOI-ITAP's work in Guatemala include an evaluation of the management of archaeological resources; the improvement of trails for tourists in Lake Atitlán; and the provision of a radio system and weather stations to enhance fire response, law enforcement, and search and rescue missions. DOI-ITAP also provided technical training related to law enforcement, fire prevention, and park management.

DOI-ITAP also forged a relationship between Colombian and Guatemalan law enforcement staff who share many common issues. Since the close of this program, the Colombians have expanded their cooperation with Guatemala to work on broader issues related to the drug trade.

## **Honduras – Rio Platano Biosphere**

Part of the largest contiguous rain forest in Central America, the Río Plátano Biosphere Reserve is a World Heritage Site and the first and largest UNESCO-designated Man and the Biosphere Reserve (1980) in Central America. DOI-ITAP worked to protect the indigenous peoples and the biological diversity of the Río Plátano Biosphere Reserve, one of 22 international sites on the List of World Heritage in Danger. The main threats to the Reserve are illegal human intrusions and settlement across its western and southern boundaries. DOI-ITAP worked to promote the conservation of biological diversity by direct actions in the Reserve and helping the Government of Honduras establish administrative controls throughout the Reserve.

DOI-ITAP's work in Honduras mainly dealt with economic development, tourism, community participation, and local capacity building. Key initiatives included assisting the establishment of the first two lending banks in the Reserve; helping create some initial infrastructure in the Reserve including food, lodging, and restroom facilities; and developing promotional materials to attract tourists. DOI-ITAP also provided training in endangered species conservation; strategic planning; decision-making, negotiation; conflict resolution; communication; and uses of technology to a variety of local community, educational, political, and trade organizations in the Reserve.



## **India – Impacts of Human Activities on Elephants**

DOI-ITAP provided equipment—primarily radio telemetry equipment for elephants—to assist in assessing the impact of human activities on ungulate populations in Rajaji-Corbett National Parks. The data gathered was used to identify mini-core areas for protection to maintain the biological integrity of the area and to provide recommendations for eco-restoration and effective management.

## **Indonesia – Coal Seam Fires**

DOI-ITAP provided technical assistance to the Indonesian Ministry of Energy and Mineral Resources to train them in establishing a long-term capability to respond quickly to coal seam fires—particularly those that present a threat to human health and safety, the environment, and infrastructure. Before the project began in October 1998, a significant effort was not being made to put out coal fires. DOI-ITAP helped extinguish fires and trained Indonesian staff on fire-fighting techniques. Fifty-six of the fires DOI-ITAP helped extinguish were in the Sungai Wain Nature Reserve area—a release area for rehabilitated orangutans. DOI-ITAP taught appropriate personnel methods of suppression that would minimize disruption of the habitat. The Coal Seam Fire Project contributed directly to establishing linkages between the regional Ministry offices (Kanwils) and the provincial and local governments that helped identify and locate coal seam fires.

DOI-ITAP assistance directly prompted a Ministerial Decree on October 7, 1999 that established policy regarding coal fire suppression for the Ministry. The decree clarifies the Ministry's responsibility to extinguish coal fires, assigns the lead for implementing the program to Kanwil offices (regional offices of the Ministry), and authorizes use of the Coal Royalty Fund to support the activities. As a result of the new decree and the publicity the project has received locally, coal fires are now being reported in several other provinces. Most importantly, the Ministry is putting out fires without outside assistance.

## **Indonesia – Mine Policy**

DOI-ITAP provided technical assistance to the Government of Indonesia to support the decentralization process and to build capacity in local governments to manage mineral resource programs at the local level. Through a long-term on-site Project Director on detail from the Department's Office of Surface Mining (OSM) and short-term exchanges of OSM and state-level mining experts, DOI-ITAP provided technical support to the national government and selected provincial and county governments. An intern program and advanced inspector training was provided to appropriate Indonesian professionals to support decentralization efforts and to build local capacity.

Through the Department's Office of Surface Mining, DOI-ITAP:

- Helped relevant Indonesian agencies develop more rational positions on mining and the environment.

- Trained staff on mining, mining impacts, mitigation, reclamation, and minerals management.
- Helped the Indonesian government develop water quality standards for the coal mining industry. Ministerial Decree KepMLH/113/2003 (on coal mining effluent limits) was signed and implemented in July 2003. The decree sets standards for discharges from both mining areas and preparation plants. The standards are similar to those adopted in the U.S. for pH, Iron, and Manganese but are higher for Total Suspended Solids.
- Helped the Indonesian government develop water quality standards for the copper and gold industries. These new standards were promulgated in a Ministerial Decree in October 2004.
- Trained Indonesian staff on the review of environmental impact analyses for mining operations. The entire course (lesson plans and student handouts) was translated into Bahasa, Indonesian. The course continues to be provided by the Government of Indonesia.
- Conducted U.S. study tours to familiarize Indonesian staff with decentralized mining regulation in the U.S. During the visits, the participants visited a number of active mines (coal/metal and pre-law abandoned mines/superfund sites) and explored such issues as developing and implementing performance standards for mining operations; water quality standards and water discharge permits; and abandoned mine land reclamation and funding.
- Introduced cyanide vat leach technology to small scale miners who have been using mercury amalgamation to recover gold. The conversion from mercury amalgamation to cyanide leaching will—besides being more efficient—greatly reduce the cumulative environmental impacts of mercury discharges to the local river systems and air.

#### **Jamaica – Ministry of Land and Environment – Mines and Geology Division**

DOI-ITAP partnered with Jamaica's Ministry of Land and Environment, Mines, and Geology Division to provide training to mining inspectors. The Mines and Geology Division functions to license, monitor, and regulate all mining and quarrying activities on the island—in addition to mapping the country's geological resources. During the 1-week training, the 20 participants received instruction on quarry safety, sedimentation of stream channels, environmental best practices and visual impact.

#### **Jordan – Cultural Resource Management**

Petra, the ancient capital of the Nabataeans, was inscribed on the World Heritage List in 1985. Petra is an archaeologically fascinating site, world famous for its magnificent building facades carved into beautiful stone canyon walls. Inhabited since Neolithic times, Petra entered its golden age when the Nabataeans chose this site to be the royal seat of King Aretas in the second century BCE. For several centuries thereafter, Petra played a dominant role on the world stage and flourished as an economic and religious center, and notably as a sacred funerary city. Petra was once a major crossroads for the caravan routes that led to Sinai, the Red Sea, the Dead Sea, Egypt and Syria. The integrity and conservation of the site are threatened by an increased flow of tourists to the site and the sideline activities this tourism engenders. In January 2003, the U.S. DOI and the Kingdom of Jordan signed a Memorandum of Understanding to facilitate technical

support and training to improve the institutional and organizational structure of the Petra Management Unit, site management and protection of the resources at Petra Archaeological Park and other protected sites in Jordan, and the skills of Park staff. DOI-ITAP provided technical assistance to improve management of the site.

### **Kenya – Samburu Heartland**

The Samburu Heartland is located just north of the equator in the rain-shadow of Mt. Kenya. The Heartland is one of the few areas in Kenya where wildlife numbers outside parks have increased in recent years. DOI-ITAP assisted the African Wildlife Federation (AWF) in planning for management of this area. DOI-ITAP developed a framework for a general management plan for Samburu Game Reserve and the adjoining area. DOI-ITAP also consulted with stakeholders and advised them on outreach, budgeting, and training needs.

### **Mongolia - Lake Hovsgol National Park**

Lake Hovsgol National Park, part of the Selenge River watershed and a sister lake to Lake Baikal in the Russian Far East, is one of Mongolia's particularly environmentally sensitive areas. The site is experiencing growing tourism interest. The Park boasts several endemic species and also contains two towns, Hatgal (south) and Hanck (north) which function as part of the Park's cultural heritage. At the time of project's inception, the Park was inadequately managed and the communities in and around the Park enjoyed few benefits from their proximity to the Park or its tourism. DOI-ITAP's technical assistance program was designed to build the capacity of Lake Hovsgol National Park staff to better manage the natural resources of the Park, enhance the visitor experience by improving the interpretation program, increase local community involvement in Park decisions and Park-related income generation, and improve staff resources by establishing a visitor fee program.

Some of this project's successes include the development of a new visitor center, the installation of a solar electricity system, and the set-up of a GIS with digitized maps. This project also benefits local communities through the development of community environmental education centers in all communities around the park and the marked improvement of several local school facilities.

### **Morocco – Rural Tourism Development**

In early 2005, DOI-ITAP was invited to partner with the USAID/Morocco Rural Tourism Project to provide visitor management capacity building for three targeted regions in Morocco: Pays d'Accueil Touristique (PATs) – Immouzer Ida Outanane in the south, Ifrane in the Middle Atlas Mountains, and Chefchaouen in the north. With logistical support from Chemonics, a team of three DOI-ITAP experts provided a workshop for Moroccan counterparts on the process for developing site designs. In conjunction with the workshop, the team designed scenic overlooks, rest areas, a campground, and a trail for pilot locations in Ifrane and Immouzer PATs, in addition to providing a series of recommendations for site construction and management. Working with local contractors, Moroccan counterparts and Chemonics International constructed the facilities that were designed in cooperation with DOI-ITAP experts.

For many years at the Balcon d'Ito site in Ifrane PAT, local vendor stalls had lined the roadside and blocked the scenic view. Despite initial concerns, the vendors agreed to re-locate on either side of a rest area that was designed by DOI-ITAP and Moroccan counterparts. The newly constructed rest area has a scenic overlook with interpretive panels, benches, a small trail, and plenty of parking spaces. With these amenities, more tourists are stopping to enjoy the site, and the local vendors report that they have doubled their business since the new rest area has been in place.

With logistical support from Chemonics, a team of three DOI-ITAP experts provided a workshop for Moroccan counterparts on visitor education, information and interpretation. In conjunction with the workshop, the team designed display panels and a floor plan for a visitor information center in Ifrane PAT; display panels and an interpretive plan for a women's argan oil cooperative in Immouzer PAT; signs for Ifrane and Immouzer PATs; and provided a series of recommendations for visitor education, information, and interpretation in Morocco. Working with local contractors, Moroccan counterparts and Chemonics International built and installed the signs and display panels that were designed in cooperation with DOI-ITAP experts/funded by USAID Morocco. In addition, they applied the recommendations of the DOI-ITAP team to upgrade the interpretive capabilities of the visitor information center in Ifrane PAT and the women's argan oil cooperative in Immouzer PAT.

### **Nepal – Shey Phoksundo National Park**

Shey Phoksundo National Park is Nepal's largest national park and covers 355,500 hectares. Located in the western part of the Himalayas, the Park is a biological crossroads of the Himalayan mountain range and the Tibetan plateau. Shey Phoksundo National Park also has a unique cultural heritage with one of the highest and oldest permanent settlements of highland agriculture/pastoralism. At the time of DOI-ITAP project's inception, the Park faced threats from unregulated tourism development and unsustainable resource use patterns—driven in part by increasing numbers of porters and outside guides. The program was designed to strengthen environmentally sensitive tourism development, bolster protected area management, build environmental interpretation skills, and encourage sound community-based resource management in and around the Park.

DOI-ITAP worked to enhance park-community relations through the launch of a junior ranger program that continues to thrive today, in addition to partnerships with various businesses to help them benefit from park tourism. DOI-ITAP trained more than 250 community representatives; civic, religious, and business leaders; teachers; and natural resource professionals on the concepts of community development in association with protected areas. During the 4-year program, park staff interacted regularly with the DOI-ITAP team and learned about U.S. standards of ethics, professionalism, and dedication to resource management. The Park staff was provided binoculars, bird books, mammal guides, and bird and mammal checklists to help them enhance their job performance. DOI-ITAP also helped develop wildlife monitoring reporting forms for Park staff use. Working with Park staff, local villagers, and religious leaders, DOI-ITAP assisted in the development of the Park's first self-guided nature trail and brochure at Phoksundo Lake.

## **Peru – Improved Environmental Management in Targeted Areas**

DOI-ITAP provided technical assistance to support Peru's Instituto Nacional de Recursos Naturales (INRENA) in its protected area management efforts, particularly with regard to making the case for an increased budget for INRENA and generating increased revenue for the protected area system.

DOI assisted INRENA in the development and completion of a technical document that estimates the value of the benefits provided by the national system of natural protected areas to the national economy of Peru. The objective was to present the findings in a document format to justify increased funding for the protected area system. The activity was coordinated by a DOI specialist and Doug Southgate, an economist from Ohio State University.

DOI-ITAP worked with field staff to analyze willingness to pay for environmental services in Oxapampa. A DOI-ITAP economist helped develop the assessment questionnaire and compile background information for the willingness to pay survey. Field staff conducted the survey. The DOI-ITAP economist assisted with the analysis of the data and completion of the final report.

DOI-ITAP sponsored a 5-day workshop in Peru for representatives of Peru's various government agencies involved in natural resource management. The workshop was lead by Conservation Strategy Fund. Topics included: tools to effectively analyze environmental values, apply micro-economics, and conduct cost-benefit analyses in the management of protected areas; pitfalls and issues with economics of natural resources; and conducting economic evaluation of protected areas. The training consisted of a combination of presentations, exercises, market simulations, and analysis of local data.

DOI-ITAP reviewed the concessions and entrance fee program for INRENA and developed options for implementing a new fee pilot project at Paracas National Reserve—a large, popular marine park 3 hours south of Lima. The team focused on the level of visitor services offered at the Reserve in conjunction with what Peruvian law allows in order to recommend adjustments to the entrance fee currently in effect at Paracas. Although Peruvian law currently prohibits differentiated entrance fees (higher entrance fee for foreign vs. national visitors) and the visitor services offered are minimal, the team presented to the Peruvian government an array of options for collecting more dollars from foreign visitors through concession operations and new fee strategies within the park. A final document in English and Spanish was produced.

## **Philippines – Coral Reef Management Training**

DOI-ITAP provided training in coral reef and marine protected area management to resource professionals in East Asia. The participants in the training were from local *Bantay Dagats* (community-based sea watch patrol teams) and NGO representatives who have responsibilities in marine law enforcement in the Philippines near shore waters and marine protected areas. The sessions included training in basic patrol and arrest techniques; collection, preservation, and courtroom presentation of evidence; fish identification; local marine law; interagency coordination; and basic boating and safety. The training complemented the World Wildlife Fund

program in the Sulu-Sulawesi Eco-Region. The Sulu Sea contains the most biologically diverse coral resource in the world. The training greatly improved the capacities of the local *Bantay Dagat*. In Mabini and Tingloy, commercial vessels are not encroaching on the municipal waters to the extent they did in the past. As a result, the municipal fishermen are able to catch more fish (both in terms of quantity and species of fish) and do not need to fish as far from the coast. Given the success of the DOI-ITAP training, the State Department sponsored 22 Philippine officers to complete a 2-week “Small Craft Marine Law Enforcement Training Program” conducted at the Federal Law Enforcement Training Center in Brunswick, Georgia.

### **Russia – Endangered Species Conservation**

DOI-ITAP provided technical assistance to regional and national Russian conservation agencies on the conservation of endangered species such as the Siberian (Amur) tiger and their critical habitat. DOI-ITAP provided training to Russian parks and customs stakeholders on CITES implementation related to inspections techniques, permit processing procedures, and the role of the Scientific Authority in support of permit issuance. A manual on CITES implementation and biological identification of wildlife species in the Russian Far East was produced in support of this training. DOI-ITAP also provided critical supplies to the Primorskiy Krai-based Amba Patrol, including winter hunting boots; night vision binoculars; 35mm film; ranger berets; and microcassette recorders. These federal Russian anti-poaching rangers were also participants in a five-day seminar on wildlife law enforcement at Ussurisk Zapovednik. A joint report was produced with the Russian State Committee on Environmental Protection and Global Survival Network to the June 1997 CITES Conference of Parties on the positive impact of joint US and Russian—government and non-governmental—anti-poaching efforts in the conservation of the Siberian tiger.

### **Russia – Kamchatka Peninsula**

DOI-ITAP worked with the United Nations Development Program (UNDP) to provide technical assistance to selected protected areas in the Kamchatka Peninsula, Russia. Historically, Kamchatka’s vast natural resources—which include more than 2,000 species of plants and approximately 10,000 Kamchatka brown bears—was protected by its remoteness, rugged landscape, and later by its strategic military importance. The economic reform and societal upheaval of recent years have resulted in severe economic hardships, and protected area budgets have sharply declined. As a result, there are significant and increasing threats to Kamchatka’s biodiversity and protected areas. In support of UNDP’s comprehensive conservation and development efforts in the region, DOI-ITAP provided training in concessions contracting for protected areas in the Kamchatka Peninsula.

### **South Africa – Richtersveld National Park**

Richtersveld National Park (162,445 hectares) is both South Africa's newest park and the only one in South Africa established through a contractual agreement with local communities. The Nama people work in partnership with the National Parks Board to maintain traditional pastoralism and promote and maintain the unique biodiversity in the Park. DOI-ITAP provided technical assistance on livestock grazing management for the Richtersveld Park staff, National

Parks Research Unit scientists, and South African university scientists. In addition, the South Africa National Parks Board Scientific Officer in charge of this project visited the US and learned about BLM's policies and management practices regarding rangelands, livestock and vegetation monitoring, remote sensing, and GIS capabilities. Finally, DOI-ITAP provided equipment to help set up a GIS and a biological monitoring system in the Park.

#### **South Africa – Working for Water**

DOI-ITAP provided assistance to the National Parks Board of South Africa to develop the Working for Water Project at Table Mountain, Cape Town, South Africa. The project promoted methods of curbing the invasion of non-indigenous species into the Table Mountain area of Cape Town. It is estimated that this project created 600 jobs. An independent, outside evaluation of this project showed that invasive alien vegetation had been cleared effectively, thereby improving the hydrology and biodiversity of a globally significant conservation area. The project also helped pioneer a model for development in which participants are left empowered to look for work, start a business of their own, or become independent contractors.

#### **South Africa – Southern Africa Environment Web Page**

DOI-ITAP provided technical assistance in launching a Southern Africa Environment website. The site provides extensive and current information on developments in South African environmental law and policy in a format useful to environmental NGOs; community-based organizations; provincial and local officials; university/secondary school teachers and students; and the general public. The site ([www.saep.org](http://www.saep.org)) was officially launched on June 1, 1996, as a follow up to the U.S.-South Africa Binational Commission.

#### **South Africa – Water Convention**

DOI-ITAP personnel helped the South African Department of Water and Forestry Affairs develop a strategy to implement major initiatives in water conservation, demand management, and water law with the goal of achieving more equitable distribution of water. DOI-ITAP also supported a workshop on best management practices on water conservation.

#### **Southern Africa – Four Corners:**

In the African region called "Four Corners," four countries meet near the Zambezi River and the spectacular Victoria Falls: Zambia, Zimbabwe, Botswana, and Namibia. A series of parks and game reserves dot the landscape, yet the corridors for migrating wildlife to move between them are not secure. With four countries and four sets of laws and policies, coordination among the four countries for management of the watershed and the wildlife is needed. Fostering this coordination and developing a coherent circuit for tourists—as well as corridors for wildlife—are priorities under the African Wildlife Federation's Four Corners initiative funded by USAID/Regional Center for Southern Africa (RCSA). DOI-ITAP assessed the project and provided recommendations to address project needs.

## **Uganda – Mgahinga & Bwindi National Parks**

Mgahinga National Park and Bwindi National Park—a World Heritage Site—are located in southwestern Uganda and are home to the remaining 600 or so mountain gorillas left in the world. Both parks also have a wide variety of animal and plant life and offer excellent hiking opportunities along the backdrop of spectacular scenery. Both parks are pockets of wilderness surrounded by densely populated farmlands. Most conservation problems are a result of conflicts over the use of resources—the community and wildland interface. DOI-ITAP provided technical assistance related to tourist infrastructure, park interpretation, and fire management to African Wildlife Foundation’s (AWF) projects in Mgahinga and Bwindi National Parks.

## **Uganda – Queen Elizabeth National Park**

An international biosphere reserve, Queen Elizabeth National Park is one of Uganda's oldest and most visited national parks. It encompasses a wide range of species and habitats, including forest, grassland, wooded savanna, volcanic craters, lakeshore, and a wetland that is protected by the Ramsar Convention. DOI-ITAP worked to improve Queen Elizabeth National Park visitor services and to increase revenue generation through tourism. It trained and equipped field personnel within Uganda Wildlife Authority (UWA) and Peace Corps Volunteers to engage in park interpretation and to conduct basic biological inventories and monitor user impacts. DOI-ITAP also worked to promote conservation education programs in targeted communities near selected protected areas, including community-level initiatives which encouraged park-compatible economic development adjacent to Queen Elizabeth National Park. The DOI-ITAP visitor satisfaction survey was the first standardized questionnaire used throughout Uganda’s national parks.



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